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COMET P/2009 Y2 (KOWALSKI)

As first announced on *CBET* 2088, R. A. Kowalski (Lunar and Planetary Laboratory) reports a cometary object (discovery observation tabulated below) found on images taken with the Catalina Sky Survey's 0.68-m Schmidt telescope; in good seeing, it appeared more diffuse than a typical object of comparable brightness and showed what appeared to be a round coma with strong condensation in p.a. 270°. Observations by A. R. Gibbs with the Mt. Lemmon 1.5-m reflector on Dec. 20.2 UT showed a $4''.5$ broad tail in p.a. 45°. After the discovery had been added to the Minor Planet Center's 'NEO Confirmation Page', W. H. Ryan and E. V. Ryan (Magdalena Ridge Observatory, 2.4-m *f*/8.9 reflector) on Dec. 20.2 and 21.1 confirmed a faint tail in p.a. 45°. A 105-min integration by P. Birtwhistle (Great Shefford, Berkshire, England, 0.40-m *f*/6 Schmidt-Cassegrain reflector) on Dec. 20.9 showed the object to have a diameter of $\sim 6''$ with a $10''$ extension in p.a. 50°; a faint, straight tail was suspected, also in p.a. 50°, at least $25''$ (and possibly up to $45''$) long.

2009 UT	α_{2000}	δ_{2000}	Mag.	*Observer*
Dec. 20.11774	$00^h37^m55^s.48$	$+31^\circ27'27''.2$	18.9	Kowalski

The initial astrometry, along with preliminary parabolic orbital elements, appeared on *MPEC* 2009-Y40. Additional astrometry has led to the computation of the following elliptical elements (from *MPC* 67973):

$$\begin{array}{lll} T = 2010 \text{ Mar. } 30.696 \text{ TT} & \omega = 171^\circ.805 & \\ e = 0.62349 & \Omega = 262.256 & \Big\} 2000.0 \\ q = 2.33726 \text{ AU} & i = 29.864 & \end{array}$$

$$a = 6.20772 \text{ AU} \qquad n^\circ = 0.063724 \qquad P = 15.47 \text{ years}$$

η *CARINAE*

A. Verveer, Perth Observatory; and D. Frew, Macquarie University, report the following B and V photometry of η Car obtained with a 40-cm *f*/11 reflector (+ Apogee AP7 CCD camera, using standard Bessell filters; comparison star HDE 303308) at Perth Observatory: June 5.526 UT, V = 4.72, B–V = +0.71; Nov. 20.7914, 4.665, +0.709; 21.7733, 4.655, +0.714; 25.7814, 4.665, 0.714. The photometry was summed through a $22''$ aperture and naturally includes the central binary star plus all of the surrounding Homunculus nebula; the recent HST photometry of Davidson *et al.* (*IAUC* 9094) refers only to the star itself and is about a half magnitude fainter.

2009 December 31 *Daniel W. E. Green*