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COMET C/2006 S4 (CHRISTENSEN)

E. J. Christensen reports the discovery of another comet on Catalina Sky Survey images obtained with the 0.68-m Schmidt reflector (discovery observation tabulated below), the object displaying a 1'.8 fan-shaped tail spanning p.a. ≈ 210°–250° in a stacked image of four 30-s exposures obtained in poor seeing. Following posting on the 'NEO Confirmation Page', M. Tichý and J. Tichá write that their CCD images taken on Sept. 22.99 UT with the 1.06-m KLENOT Telescope at Kleť show a diffuse 10″ coma and a tail in p.a. 260°. P. Birtwhistle (Great Shefford, Berkshire, U.K., 0.40-m *f*/6 Schmidt-Cassegrain reflector) reports that his CCD images taken on Sept. 23.1 show a coma of diameter 10″ with central condensation and a tail 40″ long in p.a. 245°.

2006 UT	α_{2000}	δ_{2000}	Mag.
Sept.22.37326	$1^h50^m43^s.48$	$-16°25'58''.4$	16.8

The available astrometry, the following preliminary parabolic orbital elements, and an ephemeris appear on *MPEC* 2006-S53.

$$T = 2007\ \text{Apr.}\ 26.414\ \text{TT} \qquad \left.\begin{aligned}\omega &= 28^\circ.144\\ \Omega &= 28.811\\ i &= 52.670\end{aligned}\right\}2000.0$$
$$q = 2.89250\ \text{AU}$$

RS OPHIUCHI

M. Orio and T. Nelson, Istituto Nazionale di Astrofisica and University of Wisconsin, report that RS Oph (cf. *IAUC* 8671, 8695) was observed with XMM-Newton on Sept. 6 for about 15 hr. The count rate in the range 0.1–10 keV had decreased by more than a factor of 1000 with respect to the last XMM-Newton observation on Apr. 6. The unabsorbed flux is at least 4×10^{-12} erg cm^{-2} s^{-1}. There is still significant continuum flux below 2 keV, but the spectrum shows mainly strong emission lines. With the RGS spectrograph, several H-like and He-like emission lines of Mg, Ne, and Fe are detected (most notably Ne VII at 2.478 nm, O VIII at 1.896 nm, Ne X at 1.213 nm, and Fe XVII at 1.501 nm). The RGS lines are red-shifted with a velocity not exceeding 500 km/s. Despite the lack of significant flux above 2 keV, two emission lines of the iron triplet K(α) complex are detected with EPIC around 6.4–6.7 keV.

  Daniel W. E. Green