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COMET C/2006 M4 (SWAN)

C. E. Woodward and M. S. Kelley, University of Minnesota; and P. M. Hinz, M. A. Kenworthy, and W. F. Hoffman, Steward Observatory, University of Arizona, report the discovery, in 10.55-μm narrow-band (FWHM = 0.97 μm) images obtained with the 6.5-m MMT telescope (+ MIRAC4-BLINC) and adaptive optics (AO) secondary on Nov. 7.08 UT, of a detached-coma feature located $3''.4$ from the nuclear condensation of comet C/2006 M4 (corresponding to 2700 km at a geocentric distance of 1.10 AU) in p.a. $\approx 43^o$. Aperture photometry, derived from images obtained through thin cirrus, with the AO system locked on the diffuse comet nucleus in a $3''.1$ circular beam, yields 10.55-μm fluxes of 9.5 ± 0.5 Jy for the nuclear condensation and 4.1 ± 0.4 Jy for the detached-coma feature. The detached-coma feature is elongated along the same position angle, with a spatial extent of $\approx 3''$ by $1''.5$. The nucleus was unresolved in the diffraction-limited images (FWHM = $0''.4$) and appears to be embedded in a diffuse coma (FWHM = $0''.7$). Further mid-infrared observations are encouraged.

COMETS C/2006 R3, C/2006 R4, C/2006 S7–S9 (SOHO)

Several additional apparent comets have been found on SOHO website images (cf. *IAUC* 8740), all being Kreutz sungrazers except for C/2006 R3 (Meyer group), which was very small, stellar in appearance, elongated, and of mag $\sim$ 7.5. K. Battams notes that C/2006 R4 was mostly stellar in appearance with a hint of tail, reaching mag $\sim$ 3.5. C/2006 S7 shows a hint of tail and was mostly stellar in appearance (mag $\sim$ 5) in C3 images, while in C2 images it appeared very diffuse and quite faint. C/2006 S8 was slightly elongated and reached mag $\sim$ 4.5 in C3 images; in C2 images, it was somewhat diffuse with a hint of tail, and it faded quite rapidly. C/2006 S9 appeared stellar with a hint of elongation (mag $\sim$ 6) in C3 images; in C2 images, it was diffuse with a hint of tail and quite faint.

Comet	2006	UT	α_{2000}	δ_{2000}	Inst.	F	*MPEC*
C/2006 R3	Sept.	2.675	$10^h42^m.6$	$+ 9^o38'$	C2	HS	2006-U63
C/2006 R4		11.746	10 53.9	+ 3 18	C3	TH	2006-U63
C/2006 S7		18.138	11 20.8	+ 0 52	C3/2	RM	2006-U63
C/2006 S8		18.488	11 22.4	− 0 03	C3/2	RM	2006-U63
C/2006 S9		18.488	11 27.3	+ 0 54	C3/2	RM	2006-U63

2006 November 11 *Daniel W. E. Green*