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COMET C/2007 M1 (McNAUGHT)

R. H. McNaught reports his discovery of a comet on CCD images taken with the 0.5-m Uppsala Schmidt telescope at Siding Spring (discovery observation tabulated below), the weak discovery images showing the object to be very diffuse; the FWHM of the object on all images is slightly larger than stars of the same brightness, (6″, vs. 4″ for the stars). Following posting on the Minor Planet Center's 'NEOCP' webpage, two other observers have noted the object's cometary appearance: J. Young reports that CCD images taken in below-average seeing conditions on June 18.32–18.36 UT with the Table Mountain 0.61-m reflector show a slightly elongated coma of diameter 6″–8″ with a bright inner core and a hint of a nondescript tail in p.a. ≈ 70°–120°. J. E. McGaha, Tucson, AZ, reports that his 90-s images taken with a 0.62-m reflector on June 18.4 show a stellar nuclear condensation with a 7″ round coma.

2007 UT	α_{2000}	δ_{2000}	Mag.
June 16.70834	$20^h42^m02^s.29$	$-0°12'32''.1$	18.8

The available astrometry, very preliminary parabolic orbital elements (T = 2009 Mar. 24.947 TT, q = 6.41560 AU, ω = 73°.778, Ω = 326°.712, i = 139°.862, equinox 2000.0), and an ephemeris appear on *MPEC* 2007-M09.

V2362 CYGNI

D. K. Lynch, R. J. Rudy, R. W. Russell, S. Mazuk, and R. L. Pearson, The Aerospace Corporation; R. C. Puetter, Center for Astrophysics and Space Science, University of California at San Diego; C. E. Woodward, University of Minnesota; and R. B. Perry, Langley Research Center, NASA, report 0.4- to 2.5-μm spectroscopy of this nova (cf. *IAUC* 8697, 8698, 8710, 8731, 8785, 8788) using the Lick 3-m telescope (+ VNIRIS) on May 7 UT, as well as 0.8- to 5.5-μm spectroscopy using the Infrared Telescope Facility 3-m telescope (+ SpeX) on June 1. The nova is well into its nebular phase with lines such as [O II], [O III], [N II] dominating the optical spectrum. Emission lines of neutral metals like O I have disappeared. Weak coronal lines of [S VIII], [Si VI], and probably [Si VII] are also present, along with moderate He II emission. Line profiles are flat-topped or perhaps slightly double-peaked and have FWHM of about 2000 km/s. Thermal emission from dust that increases to longer wavelengths continues to dominate the infrared luminosity.

2007 June 18 *Daniel W. E. Green*