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COMET C/2006 P1 (McNAUGHT)

C. M. Lisse and N. Dello Russo, Applied Physics Laboratory, Johns Hopkins University; Y. Fernandez, University of Central Florida; G. H. Jones, Mullard Space Science Laboratory, University College, London; and M. Sitko, Space Science Institute, report that the Spitzer Space Telescope's IRS instrument observed comet C/2006 P1 on May 4–5 (at r = 2.4 AU, Δ = 2.2 AU). A very round, featureless coma with no obvious extension in the anti-sun direction appeared as the central source of emission in the peak-up imager at 16 μm. The 5- to 35-μm spectrum of the outflowing dust showed only a mild excess ($\sim$ 10 percent) due to silicate emission at 8-13 μm. The flux density at 10 μm was $\sim$ 0.1 Jy, and at 20 μm was 0.6 Jy. The effective temperature of the dust was 190 $\pm$ 10 K. The local equilibrium temperature at 2.4 AU was 182 K. Lisse *et al.* estimate a production rate of dust to be $\sim 6 \times 10^3$ kg/s. The spectrum is remarkably featureless and dominated by infrared emission from large particles, and is similar to that derived from comet-surface mantles. This is unexpected for a comet that, in Dec. 2006–Jan. 2007, had demonstrated large outflows of material, a highly structured dust tail due to the presence of 0.1- to 10-μm dust particles, and was still emitting dust at the time of Spitzer observations at a rate comparable to the strongly-mid-infrared-featured comets C/1996 B2 (Hyakutake) and 1P/1982 U1 (Halley) when passing closest to the earth. Lisse *et al.* further surmise that either the comet has a very thick surface mantle that was only temporarily breached during the perihelion passage by a jet or the material being emitted in May 2007 is from a surface mantle that has regrown since the comet's perihelion passage four months earlier.

NOVA VULPECULAE 2007

C. Buil, Castanet, France, writes that a spectrogram of the possible nova reported on *IAUC* 8861, obtained on Aug. 9.91 UT with a 0.28-m telescope (+ Lhires spectrograph; resolution 6800 at Hα), shows evident Hα with a deep P-Cyg profile and a FWHM of 1750 km/s ($\pm$ 80 km/s); the intensity of the Hα peak intensity is 2.4 times that of the local 670-nm continuum. M. Fujii, Kurashiki, Okayama, Japan, reports that a low-dispersion spectrogram (range 375–833 nm; resolution $\sim$ 1 nm) of the apparent nova was obtained on Aug. 9.48 UT with a 0.28-m reflector; the spectrum shows Hα, Hβ, Hγ, and He I 447.2-, 471.3-, 492.2-, 501.5-, 587.6-, 667.8-, and 706.5-nm emissions with P-Cyg profiles (Hα FWHM = 1900 km/s). These emissions suggest that the variable is indeed a classical nova.

2007 August 10 *Daniel W. E. Green*