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COMET 174P/ECHECLUS

S. Tegler, Northern Arizona University; G. Consolmagno, Vatican Observatory; and W. Romanishin, University of Oklahoma, obtained R-band CCD images on Apr. 2.3 UT with the Vatican Advanced Technology 1.8-m telescope at Mt. Graham, which show that the coma previously reported around this object (*IAUCs* 8656, 8660, 8677) has developed a complex structure. A low-surface-brightness coma of diameter $2'$ is centered $1'$ east of the nuclear condensation. A higher-surface-brightness condensation $\sim 12''$ in diameter is centered $\sim 7''$ west of the nuclear condensation, which itself is of mag $R \sim 20.1$ and is clearly offset from the center of the higher-surface-brightness structure, suggesting a detached coma produced by a transient event. A rough measurement of the entire $2'$-diameter object gives a total R magnitude of 16, while the higher-surface-brightness region has $R = 17.9$ (as measured in a $12''$-diameter circle centered $7''$ west of the nuclear condensation).

COMET 73P/SCHWASSMANN-WACHMANN

This comet continues to fragment (cf. *IAUC* 8693, *CBET* 453), including a splitting of component 'G' (evidently around Mar. 6; cf. *CBET* 464), which is now near total visual mag 12. Component 'B', now in outburst about as bright as component 'C' (near total visual mag 9.0–9.5), appears also to have fragmented (cf. *CBET* 473).

M. L. Sitko, B. A. Whitney, and M. J. Wolff, Space Science Institute; C. M. Lisse, Johns Hopkins University; E. F. Polomski, University of Minnesota; R. W. Russell and D. K. Lynch, The Aerospace Corporation; and D. E. Harker, University of California, San Diego, report on observations made of comet 73P's component 'C' using the Infrared Spectrograph of the Spitzer Space Telescope on Mar. 17.05 UT. A smooth continuum was observed between 5 and 8.5 μm, followed by a structured silicate emission feature extending to 12.2 μm, and then a continuum extending to 13.5 μm. An underlying blackbody with a temperature of 235 ± 5 K was fitted to the continuum fluxes at 7.8 and 12.5 μm. The grain temperature was $\sim$ 2–3 percent higher than that of an equilibrium blackbody at the comet's heliocentric distance of 1.47 AU. The strength of the silicate feature was 33 percent above the underlying continuum. Within the silicate band, emission peaks at 9.4, 9.9, 10.4, and 11.2 μm were observed — consistent with a mixture of olivine and pyroxene dust. The measured flux at wavelength 10.5 μm (slit size $3''.7 \times 57''$) was 0.75 Jy, or magnitude [10.5 μm] = 4.3.

2006 April 11 *Daniel W. E. Green*