Abstract Submitted
for the GEC06 Meeting of
The American Physical Society

Dissociative Electron Attachment to Acetylene ANN OREL, SLIM CHOUROU, Applied Science Department, University of California, Davis — Experimental studies of electron impact on acetylene show the presence of a Π^* resonance at 2.6 eV which leads to C_2H^- + H. These fragements both have Σ symmetry (C_2H^-, $^1\Sigma$; H, ^{1}S), therefore, there must exist a curve crossing at bent geometries to explain these fragements. We performed electron scattering calculations using the complex Kohn variational method to determine the resonance parameters of this system. We discuss the mecanisms leading to dissociation into the product channels and report the computed cross sections. The results are then compared to available experimental findings. Work supported by NSF PHY-05-55401.

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Date submitted: 16 Jun 2006 Electronic form version 1.4