

Abstract Submitted  
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**New Experimental Apparatus for Momentum Imaging of Electron-Impact Induced Molecular Dissociation** ALI MORADMAND, Auburn University, CHAD ROSE, DEVIN KALAFUT, ALLEN LANDERS, MIKE FOGLE — The construction of a new COLTRIMS-type momentum imaging apparatus is being built at Auburn University to examine dynamics and energetics of various dissociation pathways induced by electron impact. The new apparatus will consist of a skimmed, supersonic gas jet in a crossed-beam geometry with an electron beam capable of producing electrons with an energy range of  $\sim 1 - 2000$  eV. A timed electron beam pulse in concert with a pulsed electric field extraction system allows for the momenta and flight times of the various ion fragments to be measured by a position-sensitive, multi-hit detector. Processes such as dissociative single and double ionization as well as dissociative electron attachment will be studied with this new apparatus.

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