Abstract Submitted
for the DAMOP08 Meeting of
The American Physical Society

Momentum Imaging in Dissociative Ionization of Small Molecules by Low Energy Electron Impact J.D. DAUGHHETEE, J.B. WILLIAMS, M. SCHÖFFLER[1], J. STEWART, E.J. CLOTHIAUX, A.L. LANDERS, Auburn University — Our experimental apparatus enables observation of electron collisions with either molecular or atomic targets. A pulsed electron gun is used to create collision events within a diffuse target. The resulting positive fragment ions are then guided toward a position sensitive multi-hit detector by means of a pulsed electric field. Collision information such as momentum, fragment charge state, and flight time is subsequently analyzed in coincidence. A coaxial magnetic field allows for electron energies ranging from a few eV up to 2 keV. Preliminary measurements of dissociative ionization of small molecules will be presented.

[1]University of Frankfurt

Allen Landers
Auburn University

Date submitted: 04 Feb 2008 Electronic form version 1.4