

Abstract Submitted  
for the DAMOP12 Meeting of  
The American Physical Society

**Positron Reaction Microscope**<sup>1</sup> D.W. MUELLER, C. LEE, C. VERMET, S. ARMITAGE, University of North Texas, D. SLAUGHTER, Lawrence Berkeley, L. HARGRAVE, Cal-State Fullerton, A. DORN, Max Planck Institute fur Kern Physik-Heidelberg, J. BRUNTON, Australian National Unveristy, S.J. BUCKMAN, Australian National University, J.P. SULLIVAN, The Australian National University, CENTRE FOR ANTIMATTER-MATTER STUDIES COLLABORATION — We are developing a positron reaction microscope to measure kinematically complete ionization reactions of atoms and dissociative ionization of simple molecules by positron impact. The experiment is designed to use the slow positron beamline at the ARC Centre for Antimatter Matter Studies (CAMS) node at the Australian National University (ANU). This project is a collaboration among the University of North Texas, CAMS, and the Max Planck Insitute for Kern Physik in Heidelberg. Initial measurements and apparatus calibration will be performed using electrons. For positron measurements, the apparatus will be rolled into position on the slow positron beamline at the CAMS site at ANU.

<sup>1</sup>National Science Foundation and the Australian Research Council Centre of Excellence Centre for Antimatter Matter Studies

Dennis Mueller  
University of North Texas

Date submitted: 31 Jan 2012

Electronic form version 1.4