Positron Reaction Microscope\textsuperscript{1} DENNIS MUELLER, SIMON ARMITAGE, CORBIN VERMET, CHRISTOPHER LEE, University of North Texas, ALEXANDER DORN, Max-Planck-Institut für Kernphysik Heidelberg, STEPHEN BUCKMAN, JAMES SULLIVAN, The Australian National University, UNIVERSITY OF NORTH TEXAS COLLABORATION, MAX-PLANCK-INSTITUT FÜR KERNPHYSIK HEIDELBERG COLLABORATION, THE AUSTRALIAN NATIONAL UNIVERSITY 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 Institute 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.

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