Abstract Submitted
for the DAMOP01 Meeting of
The American Physical Society

Sorting Category: 26

Double ionization of spatially aligned D_2 by fast highly charged ions[1] A.L. LANDERS, A. AL-NASER, J.A. TANIS, Department of Physics, Western Michigan University, Kalamazoo, MI 49008, E. WELLS, Department of Physics, University of Virginia, Charlottesville, VA 22904, T. OSIPOV, I. ALI, I. REISER, K.D. CARNES, I. BEN-ITZHAK, P. RICHARD, C.L. COCKE, J.R. Macdonald Laboratory, Kansas State University, Manhattan, KS 66506 — Double ionization of D_2 molecules by 19 MeV F^{8+} ions was studied using a COLTRIMS approach. Fast imaging detectors, a supersonically cooled gas jet, and the time focusing properties of the KSU LINAC (producing ~400 ps pulses) are combined to fully measure the vector momenta of the charged fragments produced in these ionizing collisions. The molecular alignment at the time of the collision is determened *a posteriori*. Preliminary results indicate that the double ionization cross section shows some dependence on molecular orientation relative to the ion beam. Analysis of the correlated electron and recoil momenta is underway.

[1]Supported by the Chemical Sciences, Geosciences and Biosciences Division, Office of Basic Energy Sciences, Office of Science, U.S. Department of Energy

Eric Wells
edw8n@virginia.edu
University of Virginia

☐ Prefer Oral Session
☒ Prefer Poster Session

Special instructions: primary

Date submitted: February 2, 2001 Electronic form version 1.2