

Abstract Submitted
for the DAMOP01 Meeting of
The American Physical Society

Sorting Category: 26

Double ionization of spatially aligned D₂ by fast highly charged ions¹ 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. BENITZHAK, P. RICHARD, C.L. COCKE, J.R. Macdonald Laboratory, Kansas State University, Manhattan, KS 66506 — Double ionization of D₂ molecules by 19 MeV F⁸⁺ 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 determined *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.

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

Prefer Oral Session
 Prefer Poster Session

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Special instructions: primary

Date submitted: February 2, 2001

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