Photoionization and Dissociation of Dichloroethene (C₂H₂Cl₂): Towards Molecular Frame Photoelectron Angular Distributions

1 D. D. CALL, University of Nevada, Reno, M. WELLER, G. KASTIRKE, Goethe University Frankfurt, R. A. STROM, Auburn University, V. DAVIS, G. PANELLI, University of Nevada, Reno, S. BURROWS, Auburn University, K. LARSEN, Lawrence Berkeley National Lab, N. MELZER, Goethe University Frankfurt, T. SEVERT, Kansas State University, O. KOSTKO, W. ISKANDER, D. SLAUGHTER, TH. WEBER, Lawrence Berkeley National Lab, A. L. LANDERS, Auburn University, J. B. WILLIAMS, University of Nevada, Reno — An experiment was performed using soft X-rays at the Advanced Light Source (ALS) in the Lawrence Berkeley National Lab on Beamline 9.0.1. Photoionization and dissociation of 1,1-Dichloroethene and trans-1,2-Dichloroethene at the Chlorine L-edge was performed with photon energy of 211.9 eV. Chlorine ionization threshold energies are 207.9 eV and 206.26 eV. Data was collected to examine the correlated momenta of the molecular fragments and the photoelectron in coincidence using the COld-Target-Recoil-Ion Momentum Spectroscopy (COLTRIMS) method. Preliminary results will be shown.

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