Abstract Submitted
for the GEC18 Meeting of
The American Physical Society

A theoretical and experimental investigation of two-center interference effects in electron impact ionization of diatomic molecules (H_2 and N_2).[1] SADEK AMAMI, Department of Physics, Missouri University of Science and Technology, Rolla, Missouri, ZEHRA N. OZER, Department of Physics, e-COL Laboratory, Afyon Kocatepe University, 03200, Afyon, Turkey, DON MADISON, Department of Physics, Missouri University of Science and Technology, Rolla, Missouri — In this work, we examine possible two-center interference effects by comparing triple differential cross sections (TDCSs) for electron impact ionization of an atom with the corresponding diatomic molecule for H2 and N_2. The ratio of the TDCS for a diatomic molecule to the equivalent atomic TDCS (called the I-factor) is a sensitive test for interference effects. We will present the I-factor, for 350 eV electron impact ionization of H_2 and N_2, by comparing theoretical 3-body distorted wave approximation (3DW) results with experimental data measured at the e-COL laboratory.

[1]work supported by NSF

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Date submitted: 16 Jun 2018 Electronic form version 1.4