

Abstract Submitted
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Theoretical and Experimental Studies for Electron Impact Ionization for Argon and Xenon Measured in the Perpendicular Plane¹ OLA AL-HAGAN, Missouri University of Science and Technology, CHRISTIAN KAISER, ANDREW MURRAY, University of Manchester (UK), DON MADISON, Missouri University of Science and Technology — Our recent study using the three body distorted wave (3DW) approximation method showed good agreement with experimental measurements for fully differential cross sections (FDCS) for the ionization of both H₂ and He by electron impact in a plane perpendicular to the incident beam. New physical effects were found in the perpendicular plane which had not previously been seen in studies limited to the scattering plane. The large differences between He and H₂(same number of electrons and protons) were attributed to the nuclear charge distributions. The purpose of this work is to extend the perpendicular plane studies to heavier targets and ionization of p-shells. Experimental and theoretical results will be presented ionization of argon and xenon for case in which both final state electrons have the same energy ranging between 1 eV to 25 eV.

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