

Abstract Submitted
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Importance of final state electron-electron interactions in the Triple Differential Cross Sections for Electron Impact Ionization of Neon¹ S.M. AMAMI, DON MADISON, Missouri S&T, HARI SAHA, University of South Florida, THOMAS PFLUEGER, XUEGUANG REN, ARNE SENTLEBEN, ALEXANDER DORN, JOACHIN ULLRICH, Max-Planck-Institute for Nuclear Physics, Heidelberg, Germany — Three-dimensional triple differential cross sections have been calculated and measured for 61eV electron-impact ionization of the 2p state of neon. Three-dimensional distributions for the ejected electron will be presented for a fixed incident projectile energy and scattered projectile angles ranging between 20 degrees and 70 degrees and ejected electron energies ranging between 2eV to 20eV. The theoretical model used for the calculations is the DWBA (distorted wave Born approximation). The importance of PCI (post collision interaction between the scattered and ejected electron) will be examined by either including or excluding this effect in the final state wavefunction. The importance of the interaction between the ejected electron and the residual atomic electrons will be examined by comparing results using distorted waves calculated in a static potential with Hartree-Fock distorted waves.

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