Abstract Submitted
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**Single Ionization of He and H by 75 keV Proton Impact** JASON ALEXANDER, AARON LAFORGE, MICHAEL SCHULZ, Department of Physics and the Laboratory for Atomic, Molecular, and Optical Research, University of Missouri-Rolla, Rolla, Missouri 65401 — Recoil-ion momentum spectroscopy and projectile momentum spectroscopy have been applied to the study of single ionization of He and H by 75keV proton impact. Doubly differential cross sections as a function of the projectile energy loss (or equivalently electron energy) and the scattering angle will be discussed. The results will be compared to earlier doubly differential data for ionization of helium [1]. There, qualitative discrepancies to various theories were observed. Here, we will discuss to what extent these discrepancies can be attributed to an insufficient description of the initial target state. Analyzing the recoil-ion momenta will eventually enable us to obtain fully differential cross sections. [1] Vajnai, T. et al. Phys. Rev. Lett. 74 3588 (1995)

Jason Alexander
Department of Physics and the Laboratory for Atomic, Molecular, and
Optical Research, University of Missouri-Rolla

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