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Low Energy Electron Impact Ionization of Neon and Xenon[1] BRENT R. YATES, Dept. of Physics, Cal State University, Fullerton, CA, USA, KYLE KEANE, Dept of Physics and Astronomy, UC Riverside, CA, USA, MURTADHA A. KHAKOO, Dept. of Physics, Cal State University, Fullerton, CA, USA — Experimental doubly differential cross-sections for electron impact ionization of Neon and Xenon will be presented. The measurements were taken at incident energies ranging from near-threshold to below the second ionization threshold of the target and are the only set of data present in this range. Despite the fact that the targets are left similarly with an ionized P-core, the results show significant differences between the targets in terms of angular distributions as well as the shapes of single differential cross-sections for these two targets, and imply dynamics in the post collision which differ between the two targets, and suggest that relativistic effects (spin-orbit coupling) may be important.

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Murtadha A. Khakoo
mkhakoo@fullerton.edu
Dept. of Physics, Cal State University, Fullerton, CA, USA

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