

Abstract Submitted
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Single ionization of Li by 1.5 MeV/amu O^{8+} projectiles¹ M.F. CIAPPINA, M.S. PINDZOLA, Auburn University, Auburn, AL, J. COLGAN, Theoretical Division, Los Alamos National Laboratory, Los Alamos, NM — We present fully differential cross sections (FDSC) for the single ionization of Li by O^{8+} ions [1]. We use a time-dependent close-coupling approach to model the evolution of a one-active-electron wavefunction in the field of the incoming projectile for a range of impact parameters [2]. In addition a Fourier transform approach is used to extract FDSC for a specific projectile momentum transfer value [3]. This scheme allows us to incorporate information about the interaction of the two heavy nuclei (the so-called NN interaction) and to assess its influence in the FDSC. We find noticeable differences in the shape of the FDSC when we include (neglect) the NN interaction. In addition our single differential cross section calculation shows excellent agreement with recent experimental data [4]. Our scheme would be applicable to recent measurements of single ionization of Li from excited states [5].

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[3] J. Colgan, et al., J. Phys. B **44**, 175205 (2011).

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