

Abstract Submitted  
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**Charge State Studies at the University of Notre Dame** CHRIS SCHMITT, JAY LAVERNE, DANIEL ROBERTSON, MATTHEW BOWERS, WENTING LU, PHILIPPE COLLON, University of Notre Dame, NUCLEAR SCIENCE LABORATORY TEAM — Equilibrium charge state distributions have been measured for 3 – 7 MeV lithium, boron, and carbon ions passing through carbon foils. The data are compared to the predictions of several semi-empirical models of charge equilibrium in the  $\leq 1\text{MeV/u}$  regime. The current work underscores the general problem of extrapolating models developed for high- $Z$  projectiles to ions of low- $Z$ . A compilation of experimental data for low- $Z$  ions in the low energy regime has been used to re-parameterize a few of the charge equilibrium models for carbon foils. Experimental techniques, comments and suggestions on the nature of the equilibrium charge states of low- $Z$  ions are presented.

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