

Abstract Submitted  
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**Coulomb Corrections in Deep Inelastic Scattering and the Nuclear Dependence of  $R = \sigma_L/\sigma_T$**  DAVID GASKELL, Jefferson Lab — Measurements of Deep Inelastic structure functions from nuclei are typically performed at very high energies, hence effects from the Coulombic acceleration or deceleration of the incident and scattered lepton due to additional protons in a heavy nucleus are typically ignored. However, re-analysis of data taken at SLAC from experiments E140 and E139 indicates that the effect of including Coulomb corrections, while not large, is non-zero and impacts the extracted results non-trivially. In particular, there is a significant impact when these data are used to extrapolate the magnitude of the EMC effect to nuclear matter. In addition, the conclusion from E140 that there is no evidence for a nuclear dependence of  $R = \sigma_L/\sigma_T$  is thrown into question. When combined with recent data from Jefferson Lab,  $R_A - R_D$  at  $x = 0.5$  is found to differ from zero by two  $\sigma$ .

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