

Abstract Submitted  
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**Nuclear Scaling and the EMC Effect** DOUGLAS HIGINBOTHAM,  
Jefferson Lab — For over a quarter century, scientists have tried to understand the unexpected structure in the deep-inelastic electron scattering cross section ratios of heavy nuclei to deuterium: a phenomenon known as the EMC effect. Results of recent Jefferson Lab EMC effect measurements, as well as recent nuclear scaling measurements, have both been attributed to the local nuclear environment and not properties of the bulk nuclear system. Motivated by this observation, we have found a phenomenological relationship between the magnitude of the nuclear scaling ( $Q^2 > 1$  [GeV/c]<sup>2</sup> and  $x_B > 1$ ) and slope of the EMC effect in valence quark region ( $0.3 < x_B < 0.7$ ).

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