

Abstract Submitted
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New Measurements of the EMC Effect and Short Range Correlations at JLab Hall C at 11 GeV KAYLA CRAYCRAFT, University of Tennessee, Knoxville — The nuclear dependence of the Deep Inelastic Scattering (DIS) cross section (known as the EMC effect) has shown conclusively that the distribution of quarks in a nucleus is modified when compared to the deuteron. Short Range Correlations arise from hard interactions between nucleons inside the nucleus, which create high momentum tails on nucleon momentum distributions. The observation that the size of the EMC effect is correlated with the number of SRC NN pairs in a nucleus suggested a possible origin of the EMC effect. While the observed correlation is compelling, the correlation merits more investigation by adding additional nuclei and improving the precision on existing measurements. Jefferson Lab experiments E12-06-105 and E12-10-008 aim to do just that, making measurements of electron scattering cross section ratios in the DIS regime and at $x > 1$ for a large body of nuclei. As part of the initial commissioning of the new SHMS spectrometer in Hall C, a subset of the proposed measurements will add ^{10}B and ^{11}B , as well as improving existing measurements of ^{27}Al . Commissioning plans and details of early measurements will be discussed.

David Gaskell
Jefferson Lab

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