Abstract Submitted
for the APR06 Meeting of
The American Physical Society

Precise Measurement of the Nuclear Dependence of the EMC Effect AJI DANIEL, University of Houston, E03-103 COLLABORATION — Since the original observation of the modification of nuclear structure functions by the European Muon Collaboration, there has been intense experimental and theoretical efforts aimed at understanding nuclear effects in parton distribution functions. However, the experimental focus has been mainly on heavy nuclei. I will present preliminary results from Jefferson Lab experiment E03-103, a high precision measurement of the EMC effect with emphasis on the large x_{Bj} region and few-body nuclei. Data on light nuclei ,^{3}He and ^{4}He, will allow direct comparison to "exact", few-body calculations of the EMC effect and will allow an unambiguous determination of the functional form of the A- dependence of the EMC effect. The large x_{Bj} data are particularly sensitive to conventional nuclear physics effects such as binding and Fermi motion and will constrain models that incorporates these effects. This, in turn, will provide information on the role of these conventional nuclear physics effects at lower x_{Bj} where, more exotic effects are thought to be important.

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Date submitted: 13 Jan 2006 Electronic form version 1.4