

Abstract Submitted
for the DNP20 Meeting of
The American Physical Society

New Analysis of EMC Data in Heavy Nuclei JASON BANE, University of Massachusetts, JOHN ARRINGTON, Argonne National Laboratory, NADIA FOMIN, University of Tennessee, Knoxville, DAVE GASKELL, Thomas Jefferson National Accelerator Facility — The modification of nuclear quark distributions, known as the EMC effect, has been under study for several decades. Over a thousand theory papers have been published on the subject, but the underlying physics is not yet understood. Electron scattering data on light nuclei from the 6 GeV era at Jefferson lab yielded some suggestive results, negating simple density or A dependent pictures. Additionally, a correlation was observed with the nuclear dependence of short-range N-N correlations (SRCs), which are measured in a very different kinematic regime. This talk will include new results on the EMC effect from heavier targets that can be directly combined with already published SRC data to provide additional information on the EMC-SRC connection. Also, the role of Coulomb Corrections will be discussed and, in particular, their relevance in the observation of a possible nuclear dependence of $R=\sigma_L/\sigma_T$.

Jason Bane
University of Massachusetts

Date submitted: 26 Jun 2020

Electronic form version 1.4