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**From Quarks to Nuclei from JLab to the EIC**

FLORIAN HAUENSTEIN, Massachusetts Institute of Technology and Old Dominion University

Understanding the modification of quarks in nucleons within nuclei (EMC effect) is a longstanding open question in nuclear physics. Recent experimental results from electron scattering at Jefferson Lab strengthen the correlation between the EMC effect and short- range correlated pairs (SRC) of nucleons in nuclei. That means that the EMC effect is probably driven by the high-momentum highly-virtual nucleons of the SRC pairs. This connection can be tested experimentally by measuring electron deep inelastic scattering from a nucleon and detecting its correlated SRC partner nucleon (tagging). This allows us to measure the quark modification as a function of nucleon virtuality. Two tagged experiments on deuterium are underway at Jefferson Lab of which one already took data and the other will take data in the upcoming years. These experiments can be naturally extended to the Electron-Ion Collider (EIC) whose unique capabilities allow for higher  $Q^2$  and much easier detection of the tagged recoil nucleon. In my talk, I will present the current knowledge of the EMC effect and its correlation to SRC pairs, the status of the tagged measurements at Jefferson Lab, and simulation results for tagged measurements at the EIC.