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Exploring hadronization mechanisms via neutral pion electroproduction off D, C, Fe and Pb TAISIYA MINEEVA, Jefferson Lab, KYUNGSEON JOO TEAM, WILLIAM K.BROOKS TEAM — Propagation of partons inside a nuclear medium and formation of hadrons is a topic of interest to multiple communities. New data available from Drell-Yan measurements at Fermilab, heavy ion collisions in RHIC and LHC, SIDIS measurements from HERMES at DESY and Jefferson Lab all bring different types of information on short distance processes. The most direct information comes from SIDIS measurements, which have a unique ability to investigate time-dependence of hadronization by embedding it in the nuclei of varying size. This talk presents results on a series of SIDIS measurements of neutral pion multiplicities on carbon, iron, and lead nuclei normalized to deuterium. The experiment was performed at Thomas Jefferson National Accelerator facility utilizing a 5 GeV electron beam and CEBAF Large Acceptance Spectrometer in Hall B. The high statistics accumulated during the experiment allowed for a three-dimensional analysis of neutral pion attenuation studied as a function of leptonic and hadronic variables. Combined with existing data on charged pions, these data provide new insights into hadronization mechanisms.

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