

Abstract Submitted
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Experimental studies of hadronization and parton propagation in SIDIS TAISIYA MINEEVA, UCONN, CLAS COLLABORATION — A wealth of new data has become available over the past decade from DESY, Jefferson lab, Fermilab, RHIC and LHC that connect hadron propagation and hadron formation. While Drell-Yan reaction and heavy-ion collisions contribute different kinds of information of parton propagation in nuclear environment, the most direct information comes from DIS. Unique feature of semi-inclusive DIS is its ability to investigate time-dependence of hadronization by embedding it in the nuclei of varying size. Such studies begun in late 70s in SLAC, and continued with HEMRES and Jefferson lab program. A series of measurements of neutral pion electroproduction, performed on deuterium, carbon, iron and lead targets exposed to a 5.014 GeV electron beam will be presented. The data were collected using the CEBAF Large Acceptance Spectrometer at Jefferson Lab. The goal of the experiment was to measure attenuation of hadrons in a medium of varying size normalized to deuterium. We present preliminary three-fold multiplicity ratios of neutral pions in (ν, Q^2, z) and (Q^2, z, p_T^2) bins. Combined with extensive data on charged pion states, these data are providing new insights into hadronization mechanism.

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