

Abstract: Di-hadron Correlations in eA scattering in the CLAS experiment

Sebounh Paul
University of California Riverside
on behalf of the CLAS Collaboration

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The critical questions posed by the 2023 Nuclear Science Long Range Plan include “how are the various hadrons produced in a single scattering process correlated to one another”, and “how does hadronization change in a dense partonic environment?”. The results we present in this talk on azimuthal correlations in $\pi^+\pi^-$ and π^+p pairs measured by the CLAS collaboration at Jefferson Lab seek to answer both of these questions. We find that the measured correlation functions peak at $\Delta\phi = \pi$ and that this peak is wider for heavier nuclei than for deuterium. We will also give predictions for similar planned measurements in a follow-up experiment with the upgraded CLAS12 detector setup, which features a higher beam energy, higher luminosity, beam polarization (which was absent in the previous measurement), and improvements in particle identification.