

Abstract Submitted
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e+A physics at an Electron-Ion Collider LIANG ZHENG,
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TEAM — The probing of nuclei via deep-inelastic and diffractive processes in the
high-energy (low-x) regime will open a new precision window for the investigation
of the gluonic structure of matter. Studies of e+p collisions at HERA and especially
d+Au collisions at RHIC have found tantalizing hints of saturated gluon densities,
a phenomenon with substantial impact on the physics of heavy-ion collisions. With
well controlled kinematics and a reduced source of background compared to d+Au,
deep inelastic scattering on nuclear targets (e+A) at an Electron-Ion Collider (EIC)
would allow one for the first time to precisely explore the collective behavior of
densely packed gluons deep into the saturation regime. Being sensitive to the gluon
distribution, di-hadron correlations provide a key measurement to study saturation.
In this talk, I am going to discuss the capabilities of the proposed EIC at
Brookhaven National Lab with a special emphasis on the aspirations of di-hadron
correlation measurements in e+A collisions.

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