

Abstract Submitted
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Jet Reconstruction in d+Au collisions at RHIC-PHENIX

NATHAN GRAU, Columbia University, PHENIX COLLABORATION — Collisions between protons (deuterons) and nuclei provide a testing ground to understanding nuclear effects, e.g. shadowing and the EMC effect in nuclear parton distribution functions, nuclear k_T effects from multiple scattering, etc. Fully reconstructed jets offer a new experimental handle on probing this physics. It has the advantage over single particle and di-hadron measurements since the underlying kinematics of the hard scattering process is better known. In spite of the seemingly small acceptance of the PHENIX detector at RHIC, measurements of fully reconstructed jets using the Anti- k_T algorithm are possible. In this contribution we will present the current status of measurements using fully reconstructed jets in $d+Au$ collisions at $\sqrt{s_{NN}} = 200$ GeV using the PHENIX detector at RHIC. We discuss the current and future physics that are provided with such measurements focusing on the centrality dependence of nuclear k_T and jet p_T cross-sections related to the nuclear parton distribution functions.

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