

Abstract Submitted
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Pseudorapidity asymmetry at high p_T in $p(d)A$ collisions¹ ADEOLA ADELUYI, GERGELY BARNAFOLDI, GEORGE FAI, Center for Nuclear Research, Department of Physics, Kent State University, Kent, OH 44242, USA, PETER LEVAI, MTA KFKI RMKI, Research Institute for Particle and Nuclear Physics, P.O. Box 49, Budapest 1525, Hungary — We calculate pseudorapidity (η) asymmetry in pBe and dAu collisions in the framework of a next-to-leading order (NLO) pQCD-improved parton model. Our calculations are applicable in a wide range of kinematically accessible transverse momenta, p_T . The calculations [1,2] are tuned to describe existing spectra from pp collisions and asymmetric systems at midrapidity and large rapidities at FNAL and RHIC energies. We investigate the roles of nuclear shadowing and multiple scattering on the observed pseudorapidity asymmetry [3]. Using this framework, we make predictions for pseudorapidity asymmetries at high p_T and high η at a wide range of energies up to LHC. [1] A. Adeluyi and G. Fai, Phys. Rev. C **76**, 054904 (2007) [2] G.G. Barnafoldi, P. Levai, G. Papp and G. Fai, Nucl. Phys. A **749**, 291 (2005) [3] B.I. Abelev *et al.* [STAR Collaboration], Phys. Rev. C **76**, 054903 (2007)

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