

Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

Quark production in high-energy pA collisions in the Color Glass Condensate framework HIROTSUGU FUJII, U Tokyo, Komaba, FRANCOIS GELIS, CEA/DSM/SPhT, RAJU VENUGOPALAN, BNL — We present quantitative estimates of heavy flavor production in pA reactions at collider energies in the framework of the color glass condensate. We first quantify the breaking of kT-factorization as a function of the saturation scale, the quark mass and the transverse momentum. Next we evaluate the open charm/bottom cross sections numerically, and study their sensitivity to physical parameters. Our results are compared to the RHIC data for charm production and predictions are made charm and bottom production for the LHC. Finally, we apply our formalism (which includes re-scatterings of the produced quark pairs) to quarkonium production at RHIC and LHC.

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Date submitted: 25 May 2005

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