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Analysis of forward hadron spectra within DHJ + Lund model
YAUSSHI NARA, Akita International University, WEI-TIAN DENG, Huazhong University of Science and Technology, HIROTSUGU FUJII, University of Tokyo, KAZUNORI ITAKURA, KEK — Models based on the Color Glass Condensate (CGC) framework have been successful in explaining many experimental data from RHIC and LHC. However, applicability of these models are limited to a high transverse momentum region or one relies on the assumption of hadron-parton duality to compute multiplicity of the produced hadrons, because there are always non-perturbative effects in the process of hadronic interactions. In this talk, we will present a newly developed Monte-Carlo event generator based on the CGC framework. Specifically, we generate partons based on the DHJ formula which includes initial and final state radiations. Strings are formed by those produced partons and remnants which are fragment into hadrons by the Lund string fragmentation model. We will show the comparison of our results to the forward hadron spectra at RHIC and LHCf, and discuss mechanism of the particle production.

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