

Predictions of Drell-Yan in p+Pb and calculation of RpA using hybrid High Energy Factorization

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We calculate cross sections for various observables in Drell-Yan lepton pair production in p+p and p+Pb collisions within Hybrid High Energy Factorization. In particular we obtain reasonably good description of invariant mass distribution data using KS linear and KS-nonlinear gluon distribution function. Furthermore we provide prediction for saturation in p+Pb collisions and calculate nuclear modifications factors. We compare our results for p+p to predictions obtained within collinear based Monte Carlo generators working at LO and NLO accuracy. We see that differential cross section as a function of rapidity, delta R and azimuthal angle show significant difference between results of Madgraph NLO and HEF.

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