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Nuclear modification factor and dilepton production in pA collisions

The broadening of the transversal momentum (pT) spectrum, the so called Cronin effect, is traditionally explained as a consequence of the initial state interaction at partonic level. It also is a signature of the parton dynamic previous to the fragmentation. In this contribution we will focus on the nuclear modification factor having in mind, that the dilepton production avoid the hadronization phase. We explore such process in proton-nucleus collisions using the merging of the Matrix Elements (ME) approach calculated by the POWHEG in NLO with the Parton Shower simulated by the PYTHIA (PS) event generator.

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