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Nuclear effects in proton-nucleus and electron-ion collisions

Summary

In this talk, we review recent progresses in investigating the nuclear effects in relativistic proton-nucleus and electron-ion collisions. In particular, we focus on the understanding of QCD dynamics of multiple parton interaction inside nuclear medium, such as incoherent and coherent multiple scattering, which lead to nontrivial nuclear effects as observed in pA programs at RHIC and the LHC. We also show theoretical and phenomenological studies of the universality and scale dependence of nuclear medium property in terms of jet transport coefficient. Several theoretical predictions on nuclear effects in future electron ion colliders will be also presented.

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