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Abstract for an Invited Paper for the DNP10 Meeting of the American Physical Society

## Theoretical overview of cold nuclear matter effects

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In this talk I will discuss the physics of hadron and nucleon scattering at high energies from the theoretical perspective. I will focus on the phenomena related to the high patron densities which occur at extremely small values of Bjorken x accessible at these energies. Emphasis will be placed onto the initial stages of the nuclear and hadronic collisions and current physical models will be described (such as Color Glass Condensate). I will also discuss specific measurements involving nuclear targets which provide tests and verification of these ideas.