



Contribution ID: 35

Type: **bullet talk (poster)**

Longitudinal structure of the initial state from 3+1D CGC simulations

Tuesday 12 January 2021 19:40 (1h 30m)

We develop a framework to simulate the 3+1D dynamics of the initial energy deposition in heavy-ion collisions by taking into account the finite longitudinal extent of the colliding nuclei in the Color-Glass Condensate framework. Based on a simple model for the color charge distributions of the colliding nuclei, we demonstrate how the boost-invariant limit is recovered at high energies along with certain contrasting results that signify deviation from the high energy limit. We then develop a physical model of the three-dimensional color charge distributions in terms of small- x TMDs and study the non-trivial rapidity profile and the longitudinal fluctuations that emerge naturally within our framework.

Primary authors: SINGH, Pragma (University of Bielefeld); SCHLICHTING, Soeren (Universität Bielefeld)

Presenter: SINGH, Pragma (University of Bielefeld)

Session Classification: Poster

Track Classification: Physics at low- x and gluon saturation