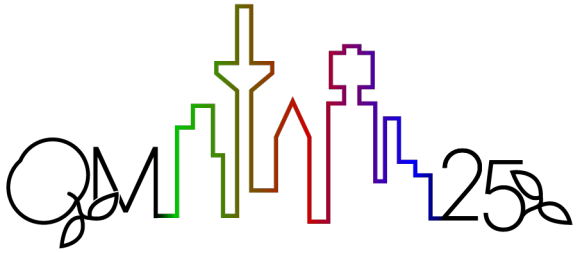

Contribution ID: **1048** Type: **Poster**

Thermalization of the longitudinally boost invariant Quark-Gluon Plasma

In this talk, we will present our extended studies on the bottom-up thermalization for a system composed by quarks, antiquarks and gluons. We will begin by performing parametric estimates for three distinct stages prior to hydrodynamization in the weak-coupling/high-energy limit, completing the analysis for pure gluon systems conducted by Baier, Mueller, Schiff, and Son. The predicted scaling behaviours of physical quantities, including the quark (and antiquark) number density, are to be confirmed through detailed numerical solutions of the Boltzmann Equation in Diffusion Approximation (BEDA). The simulation involves a novel GPU-based code capable to solve the BEDA for an arbitrary 3D setup. We will then extend our analysis to intermediate coupling regimes relevant to heavy-ion phenomenology, comparing the BEDA results with those from Effective Kinetic Theory. We will also briefly comment on the potential implications of our findings for dilepton production.

Category

Theory

Collaboration (if applicable)

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