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## Non-Equilibrium Transport of Conserved Charges in High-Energy Heavy Ion Collisions

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Non-equilibrium Green's functions provide an efficient way to describe the pre-equilibrium evolution of macroscopic quantities in early stages of heavy-ion collisions.

Within the kinetic theory framework we use moments of the distribution functions to calculate time dependent non-equilibrium Green's functions describing the evolution of initial energy/momentum/charge perturbations [1]. Using kinetic theory in relaxation time approximation we will study the pre-equilibrium evolution of a Bjorken background and compute Green's functions for the charge current and energy-momentum tensor for initial perturbations around this background. By calculating the Green's functions, we show that only modes with long wavelength survive up into the hydrodynamic regime.

[1] [Kamata, Martinez, PP, Ochsenfeld, Schlichting, Phys. Rev. D (2020)]

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