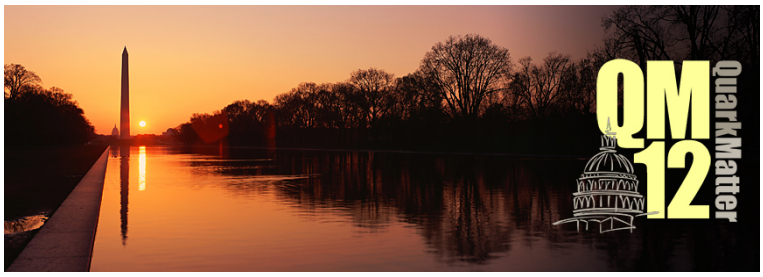

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Viscous Corrections to Hadron Phase Space Distributions from linearized Boltzmann Equation

Thursday, 16 August 2012 16:00 (2 hours)

Comparing hydrodynamic simulations to data inevitably requires the
conversion of the fluid to particles. This conversion is ambiguous for viscous fluids as an infinite class of phase space densities can produce the same hydrodynamic variables. We compute self-consistent phase space corrections for hadron species by solving the linearized Boltzmann equation. These distribution functions are then used in the Cooper-Frye formalism to calculate observables such as spectra and anisotropic flow coefficients. The results are contrasted with those obtained using the ad hoc species-independent quadratic momentum dependence (Grad ansatz) that is typically assumed in the literature.

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