



Contribution ID: 66

Type: **not specified**

Off-of-equilibrium effects on Kurtosis Along Strangeness-Neutral Trajectories

Tuesday 18 May 2021 12:30 (20 minutes)

The Beam Energy Scan program at RHIC (Relativistic Heavy Ion Collider) is searching for the QCD critical point or a first order phase transition. The main signal for the critical point is the kurtosis of the distribution of proton yields obtained on an event by event basis where one expects a peak at the critical point. However, its exact behavior is still an open question due to out-of-equilibrium effects and the current limitations of the equation of state at large densities. Here we use a simplistic hydrodynamic model that enforces strangeness-neutrality, selecting on trajectories that pass close to the critical point. We vary the initial conditions (in terms of how far-from-equilibrium they begin) in order to estimate the effect of out-of-equilibrium hydrodynamics on the kurtosis signal.

Collaboration

Authors: DORE, Travis (University of Illinois at Urbana-Champaign); STAFFORD, Jamie (University of Houston); NORONHA-HOSTLER, Jacquelyn (University of Illinois Urbana Champaign); RATTI, Claudia (University of Houston)

Presenter: DORE, Travis (University of Illinois at Urbana-Champaign)

Session Classification: Bulk (Fluctuation)