

Hydrodynamic modeling of RHIC BES

Tuesday 8 August 2017 10:00 (30 minutes)

I will review the recent progress on modeling event-by-event bulk dynamics of relativistic heavy-ion collisions at Beam Energy Scan (BES) collision energies at the Relativistic Heavy Ion Collider (RHIC) using a hybrid (viscous hydrodynamics + hadronic cascade) framework. The effects of net baryon current and its dissipative diffusion on the system's evolution will be discussed. The non-trivial longitudinal structure and dynamics of the collision systems, for example, the baryon stopping and transport, as well as longitudinal fluctuations will be highlighted. Quantitative effects of boost-invariance breaking and net-baryon current/diffusion on hadronic flow observables and HBT interferometry will be addressed. Finally, I will discuss the newly proposed dynamical initialization scheme which allows us to study the importance of the pre-equilibrium dynamics at RHIC BES energies.

Author: Dr SHEN, Chun (Brookhaven National Lab)

Presenter: Dr SHEN, Chun (Brookhaven National Lab)

Session Classification: Plenary

Track Classification: Plenary Session