



Contribution ID: 342

Type: Poster

## Bulk observables within hybrid approach for heavy ion collisions, at RHIC and the LHC, with SMASH afterburner

*Tuesday, 15 May 2018 19:10 (30 minutes)*

We present a model of the dynamical evolution of relativistic heavy ion collisions, which combines second-order viscous hydrodynamics and microscopic transport. In particular, we present a hybrid approach with MUSIC hydrodynamics, particlization with improved treatment of resonance masses based on spectral functions, and SMASH (Simulating Many Accelerated Strongly-interacting Hadrons) afterburner. In this work, we focus on low- $p_T$  hadronic observables — identified hadron  $p_T$  spectra and anisotropic flow coefficients. Given that the low- $p_T$  bulk dynamics in hadronic re-scattering is dominated by resonance excitations and decays, it is expected that implementation of mass sampling at the particlization and better treatment of resonances in microscopic transport play important roles in the late stage of heavy ion collisions. This motivates us to compare other hybrid approaches, such as MUSIC+UrQMD, to MUSIC+SMASH hybrid with an emphasis put on the importance of mass sampling at the particlization and effect of hadronic re-scatterings.

### Content type

Theory

### Collaboration

### Centralised submission by Collaboration

Presenter name already specified

**Primary author:** Dr RYU, Sangwook (Goethe-Universität Frankfurt (FIAS))

**Co-authors:** STAUDENMAIER, Jan (Goethe University Frankfurt (FIAS)); VUJANOVIC, Gojko (The Ohio State University); PETERSEN, Hannah

**Presenter:** Dr RYU, Sangwook (Goethe-Universität Frankfurt (FIAS))

**Session Classification:** Poster Session

**Track Classification:** Collective dynamics