

Contribution ID: 27

Type: Talk

Diffusion of non-Gaussianity in heavy ion collisions

Tuesday 23 July 2013 17:40 (20 minutes)

We investigate time evolution of higher-order cumulants of bulk fluctuations of conserved charges in the hadronic stage in heavy ion collisions.

The dynamical evolution of the non-Gaussian fluctuations are modeled by the diffusion master equation. In this model, we show that the fourth-order cumulant is suppressed compared with the recently observed second-order one at ALICE.

Significance of various cumulants as functions of rapidity acceptance as experimental observables to probe dynamical history of fireballs are emphasized.

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Session Classification: Phase Transition