



XXIV QUARK MATTER DARMSTADT 2014

Contribution ID: 514

Type: **Contributed Talk**

Causal baryon diffusion and colored noise

Wednesday, May 21, 2014 9:40 AM (20 minutes)

We construct a model of baryon diffusion which has the desired properties of causality and analyticity. The model also has the desired property of colored noise, meaning that the noise correlation function is not a Dirac delta function in space and time; rather, it depends on multiple time and length constants. The model can readily be incorporated in 3+1 dimensional 2nd order viscous hydro-dynamical models of heavy ion collisions, which is particularly important at beam energies where the baryon density is large.

On behalf of collaboration:

None

Primary author: Prof. KAPUSTA, Joseph (University of Minnesota)

Co-author: Dr YOUNG, Clint (University of Minnesota)

Presenter: Prof. KAPUSTA, Joseph (University of Minnesota)

Session Classification: Correlations and fluctuations

Track Classification: Correlations and Fluctuations