



Contribution ID: 675

Type: Oral

Non-Gaussian fluctuation dynamics in relativistic fluid near a critical point

Tuesday 5 September 2023 12:40 (20 minutes)

We consider non-equilibrium evolution of non-Gaussian fluctuations crucial for the QCD critical point search in heavy-ion collision experiments. We rely on the hierarchy of relaxation time scales, which emerges in the hydrodynamic regime near the critical point. We focus on the slowest modes which are responsible for observable signatures of the critical point. We derive evolution equations for the non-Gaussian correlators of these modes applicable for an arbitrary relativistic hydrodynamic flow.

[1] X. An, G. Basar, M. Stephanov and H.-U. Yee, arxiv/2212.14029

[2] X. An, G. Basar, M. Stephanov and H.-U. Yee, work in progress

Category

Theory

Collaboration (if applicable)

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Session Classification: New Theory

Track Classification: New theoretical developments