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# Characterizing hydrodynamical fluctuations in heavy-ion collisions from effective field theory approach

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Hydrodynamic fluctuations are found to be important in many situations such as cosmology, condensed matter system and heavy-ion collisions. Recently, an effective field theory for fluctuating dissipative hydrodynamics has been developed in 1511.03646 and 1701.07817. We apply this theory to investigate non-trivial consequence hydrodynamic fluctuations on the Bjorken expanding quark gluon plasma (QGP). In particular, we explore nontrivial effects due to interactions among hydrodynamical variables and noises which are systematically incorporated in the present framework but are not fully captured in conventional approaches. Finally, we discuss its application to model bulk evolution of QCD matter near the critical point as well as extracting shear viscosity of QGP.

## Content type

Theory

## Collaboration

## Centralised submission by Collaboration

Presenter name already specified

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