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Electromagnetic signals within viscous Gubser flow

We investigate thermal dilepton production in heavy-ion collisions using relativistic second-order Israel-Stewart hydrodynamics with Gubser solutions. The Gubser flow considers both the transverse expansion of the medium along with longitudinal boost invariance. We study in detail the temperature and shear stress evolutions of hot QCD medium by varying the associated parameter q of the Gubser model. The dilepton production is calculated in the presence of Chapman-Enskog like viscous correction to the particle distribution function. Varying the parameter q , we find enhanced dilepton production at small q values. We also extract effective temperature of hot QCD medium from the transverse mass spectra for different q values.

Field of contribution

Theory

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