Quark Matter 2018



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Temperature dependence of SU(3)-gluodynamics bulk and shear viscosities within lattice simulation

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This talk is devoted to the study of SU(3)-gluodynamics bulk and shear viscosities temperature dependence. We measured the correlation functions of the Energy-Momentum Tensor for a set of temperatures in the region $T/T_c \in [0.9, 1.5]$. To extract the values of bulk and shear viscosities from correlation functions we applied various parametrical and non-parametrical approaches which give consistent results. Observed temperature dependence agrees with the recent experimental data. We notice a peak of bulk viscosity in the vicinity of phase transition, as for shear viscosity, there is a slight rise with the temperature at $T > T_c$. The analysis of our data confirms that the quark-gluon plasma behaves as a strongly-interacting system.

Content type

Theory

Collaboration

Centralised submission by Collaboration

Presenter name already specified

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