

Bulk viscosity of hadronic gas

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The bulk viscosity of the hadronic medium has been estimated within a hadron resonance gas (HRG) model approach including the Hagedorn density of states. The fluctuation in the chemical composition of the hadronic medium within the ambit of the grand canonical ensemble can result in non-zero divergence of the hadronic fluid flow velocity, allowing us to estimate the hadronic bulk viscosity upto a relaxation time. The correlation of bulk viscosity with the conformal symmetry breaking (CSB) measure has been studied. The bulk viscosity along the chemical freezeout curve has been estimated and shown that at FAIR energies the bulk viscous coefficient can be enhanced by a factor of five as compared to LHC energies.

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