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Lower bound of quark relaxation time and Its conduction at finite magnetic field

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Quark gluon plasma is detected as a lowest viscous matter of unverse in heavy ion collision experiments like RHIC and LHC because its measured shear viscosity to entropy density ratio remain very close to its quantum lower bound or KSS bound, predicted from string theory calculation. A corresponding lower limit of relaxation time of quarks (and gluons) can be obtained by using the relaxation time approximation based expression of the ratio. In this strongly coupled environment, we have attempted to sketch the detailed anisotropic transportation in presence of strong magnetic field, which is expected to be produced in the heavy ion collision experiments.

Session

Heavy Ions and QCD

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