Contribution ID: **230**   Type: **not specified**

Lattice study of transport coefficients in second order dissipative hydrodynamics

Friday, 18 June 2010 15:30 (20 minutes)

The quark-gluon plasma produced in heavy ion collisions at RHIC energy is known to be very close to the ideal fluid. Calculations with viscosities and other transport coefficients, i.e. second order dissipative hydrodynamics is known as a causal theory, it includes many phenomenological transport coefficients. We attempt to constrain those transport coefficients by SU(3) lattice gauge calculation. On the basis of the phenomenological derivation of second order hydrodynamics by Israel-Stewart and Boltzmann-Einstein principle, we relate the Israel-Stewart parameters to fluctuations of off-diagonal components of energy-momentum tensor on the lattice and evaluate them.

Please, insert your presentation type (talk, poster)

talk

Primary author: KOHNO, Yasuhiro (Osaka University)

Co-authors: Dr NONAKA, Chiho (Nagoya University); Dr KITAZAWA, Masakiyo (Osaka University); Prof. ASAKAWA, Masayuki (Osaka University)

Presenter: KOHNO, Yasuhiro (Osaka University)

Session Classification: Parallel 51: Nonzero temperature and density

Track Classification: Nonzero temperature and density