



Contribution ID: 64

Type: **not specified**

Kinetic properties of the GribovZwanziger plasma

Wednesday, 9 March 2016 11:05 (30 minutes)

We study kinetic properties of a plasma consisting of gluons whose infrared dynamics is improved by the Gribov-Zwanziger quantization. This approach includes essential features of color confinement which set the plasma apart from conventional quasiparticle systems in several aspects. Our study focusses on a boost-invariant expansion for in and out of equilibrium configurations, which at late times can be characterized by the sound velocity, c_s , and the shear, η , and bulk, ζ , viscosities. We obtain explicit expressions for the transport coefficients η and ζ and check that they are consistent with the numerical solutions of the kinetic equation. At high temperature, we find a scaling $\zeta/\eta \sim 1/3 c_s^2$ which manifests strong breaking of conformal symmetry in contrast to the case of weakly coupled plasmas.

based on the eprints: arXiv:1504.03176, arXiv:1509.01242

Primary author: FLORKOWSKI, Wojciech (Institute of nuclear Physics, Krakow)

Co-authors: TYWONIUK, Konrad (CERN); SU, Nan (Bielefeld University); Dr RYBLEWSKI, Radoslaw (Institute of Nuclear Physics PAN)

Presenter: FLORKOWSKI, Wojciech (Institute of nuclear Physics, Krakow)

Session Classification: Wednesday Morning