

# Thermodynamics and kinetics of Gribov-Zwanziger plasma

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Dynamic features of a plasma consisting of gluons whose infrared dynamics is improved by the Gribov-Zwanziger quantization are presented. This approach includes important features of color confinement which set the plasma apart from conventional quasiparticle systems in several aspects [1].

We obtain explicit expressions for the transport coefficients  $\eta$  and  $\zeta$  (shear and bulk viscosity) and check that they are consistent with the numerical solutions of the kinetic equation. At high temperature, for constant both the Gribov parameter and the relaxation time used in the kinetic equation, we find linear scaling of the ratio  $\zeta/\eta$  with the conformal measure  $1/3 - c_s^2$  (sound velocity squared), which is typical for a strongly coupled system. The newest results obtained for the temperature dependent Gribov parameter show also the enhancement of the bulk viscosity at the phase transition [2].

[1] W. Florkowski, R. Ryblewski, N. Su, K. Tywoniuk, arXiv:1504.03176 & arXiv:1509.01242

[2] V. Begun, W. Florkowski, R. Ryblewski, in preparation

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