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Relaxation of a strongly coupled plasma: a holographic description

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Methods based on the gauge/gravity duality are useful tools for the study of strong interactions phenomenology. In particular, the holographic approach seems effective in describing relaxation processes of strongly coupled systems, taken initially out of equilibrium. I examine the case of a boost-invariant fluid, focusing on the production of a far-from-equilibrium configuration and on the relaxation to the hydrodynamic regime. A physical realization of this kind of system is the strongly-coupled QCD plasma obtained in relativistic heavy ion collisions. I describe how the effective temperature, entropy density, energy density and pressure can be computed, and analyze their temporal evolution. An estimate of the equilibration time is obtained.

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