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# Analytical solutions of causal relativistic hydrodynamic equations for Bjorken and Gubser flow

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Bjorken and Gubser flow profiles are well known analytic solutions for relativistic Navier-Stokes equations. Recently several attempts have been made to obtain analytic solutions for relativistic second-order dissipative hydrodynamic equations with Bjorken and Gubser flow. We obtain general analytical solutions, for these flow profiles, up to third-order viscous hydrodynamic equations for a system with vanishing bulk viscosity and chemical potential, and having a constant shear relaxation time. We also analytically determine the hydrodynamic attractors for such systems by studying the universal behavior of these solutions at late times where all informations about the initial conditions are lost. Finally we discuss the properties of these hydrodynamic attractors for transport coefficients obtained from relativistic kinetic theory in the relaxation-time approximation.

## Content type

Theory

## Collaboration

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