Contribution ID: **299** Type: **Poster**

Viscous relaxation time in relativistic hydrodynamics

Relativistic Navier-Stokes hydrodynamics is acausal and unstable. These problems are solved by introducing relaxation times into the constitutive equations of the viscous tensors. We derive the microscopic formulae of the shear and bulk viscous relaxation times by using the projection operator method. In the leading-order of perturbative calculation, we find the ratios of the viscosities and corresponding relaxations times are purely thermodynamic functions and independent of the scattering details.

Author: Dr HUANG, Xu-Guang (Institute for Theoretical Physics)

Co-author: Prof. RISCHKE, Dirk (Institute for Theoretical Physics)

Presenter: Dr HUANG, Xu-Guang (Institute for Theoretical Physics)

Track Classification: Global and collective dynamics