Seminário, Quarta-feira 06/07/2022 16:00h

Local: Auditório: Méson Pi - DRCC

Jorge Noronha, University of Illinois Urbana-Champain

Title: Hydrodynamic Frames: the Good, the Bad, and the Ugly

Three of the most cutting-edge experiments in modern science, RHIC, LHC, and LIGO are now producing data whose description requires a major overhaul of our current understanding of what constitutes fluid dynamic behavior in the relativistic regime. In this talk I will explain how the choice of hydrodynamic variables in a system out of equilibrium, i.e., our definition of the so-called hydrodynamic frame, affects the domain of applicability of relativistic viscous fluid dynamics formulations. I will also show how developments in relativistic viscous hydrodynamics obtained in heavy-ion collisions could be instrumental in determining the viscous properties of ultradense matter formed in neutron star mergers.

Based on
https://journals.aps.org/prx/abstract/10.1103/PhysRevX.12.021044