

The QCD equation of state from Heavy ion collisions and neutron star mergers:

lunedì 12 febbraio 2024 13:45 (45 minuti)

In this talk I will give a short overview on the current status and challenges in the exploration of dense QCD matter. While in relativistic heavy ion collisions, experiment and theory have been struggling for three decades to get a quantitative understanding of the QCD phase diagram. Only recently, new experimental programs allowed for significant progress. At the same time, the observation of gravitational waves from binary neutron star mergers has opened new venues in the study of dense QCD matter. Based on state-of-the-art models from both communities I intend to show the areas of overlap and opportunities for HIC and BNSM (with a short detour to core-collapse supernovae). In addition I plan to discuss open challenges and give some comments on what we can expect to learn from BNSM and what we should not expect to learn.

Relatore: STEINHEIMER-FROSCHAUER, Jan (Frankfurt Institute for Advanced Studies)