

Hot QCD and QCD-like theories on the lattice

Tuesday, 28 July 2015 09:15 (45 minutes)

In the first part of this contribution, I will give a non-technical introduction to lattice calculations, which are the standard tool to derive ab initio theoretical predictions for QCD at finite temperature. Then I will present a selection of recent, high-precision numerical lattice QCD results relevant for heavy-ion collisions. Finally, I will also discuss some analytical and conceptual insights into the physics of the quark-gluon plasma, that are obtained by generalizing lattice calculations to theories based on different gauge groups and/or in different spacetime dimensions, and combining them with other theoretical approaches (including weak- or strong-coupling techniques, effective field theories or phenomenological models).

Primary author: PANERO, Marco (University of Turin and INFN, Turin)

Presenter: PANERO, Marco (University of Turin and INFN, Turin)

Session Classification: QCD at High Temperature and Density & Phase Diagram