

Seminar

Collective flow in ultra-relativistic energy heavy ion collisions

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Heavy ion collisions at the Relativistic Heavy Ion Collider (RHIC/BNL) and Large Hadron Collider (LHC/CERN) have revealed a new state of matter, the so-called Quark-Gluon Plasma. Understanding the (hitherto-unknown) precise properties of the QGP enables to pin down the fundamental questions in QCD. In this talk, we shall focus on one of the most important probes – the collective flow of hadrons, to explore the properties of the hot and dense plasma. The state-of-the-art transport and hydrodynamic models used to study the QGP evolution will be introduced. Within these models, we shall establish the so-discovered QGP to be the most perfect fluid. A new method, based on principal component analysis, will be presented to study flow and its fluctuations simultaneously, that can provide new and detailed information on the properties of the plasma.

Wednesday, Dec 21st 2016

4:00 PM (Tea/Coffee at 3:45 PM)

Seminar Hall, TCIS