XIIth Quark Confinement and the Hadron Spectrum



Contribution ID: 353

Type: not specified

ROUND TABLE: Collectivity in Small Systems

Friday, 2 September 2016 12:00 (1 hour)

One of the main surprises brought by the heavy ion program at the LHC is the observation of long-range correlations in collisions involving relatively small systems, like proton-proton or proton-lead. Similar phenomena were previously observed in collisions between two heavy nuclei, like Au+Au (at RHIC) and Pb+Pb (at the LHC) and in that context they were associated with collective phenomena, like hydrodynamic flow. Such phenomena look indeed natural for systems which are sufficiently large, long-lived, and which have relatively strong interactions.

Yet, the fact that they are also seen in smaller systems rises interesting questions.

Are these phenomena a signal of genuine collective motion, like flow ?

Or are they related to other sources, like jets or glasma correlations in the initial state?

What are the limits of hydrodynamics, in terms of size and lifetime ?

What is the smallest droplet of liquid that can meaningfully exist ?

Such questions give often the opportunity of intense debates among experts, at various conference and also via dedicated papers.

Summary

Primary author: OLLITRAULT, Jean-Yves (CNRS)

Co-authors: MOLNAR, Denes (Purdue University); BOZEK, Piotr (AGH University of Science and Technology); ARNALDI, Roberta (Universita e INFN Torino (IT)); SCHLICHTING, Soeren (Brookhaven National Lab); LI, Wei (Rice University (US)); VAN DER SCHEE, Wilke (MIT)

Presenters: MOLNAR, Denes (Purdue University); OLLITRAULT, Jean-Yves (CNRS); BOZEK, Piotr (AGH University of Science and Technology); ARNALDI, Roberta (Universita e INFN Torino (IT)); SCHLICHTING, Soeren (Brookhaven National Lab); LI, Wei (Rice University (US)); VAN DER SCHEE, Wilke (MIT)

Session Classification: Plenary

Track Classification: Section D: Deconfinement