



XLVII International Symposium on
Multiparticle Dynamics (ISMD2017)
September 11-15, 2017, Tlaxcala City, Mexico

Contribution ID : 32

Type : **not specified**

Searches for collectivity in small systems using multi-particle azimuthal correlations with ALICE

Tuesday, 12 September 2017 14:55 (0:25)

Content

The formation of a Quark-Gluon Plasma (QGP) in heavy-ion collisions is well established by numerous measurements and their comparison to hydrodynamic models. However, in recent years, a growing number of results in small collision systems show similar properties as peripheral Pb–Pb collisions. This raises the question of whether small systems behave collectively or not, which is one of the most discussed topics in the heavy-ion community. Two- and multi-particle cumulants have proven to be an excellent tool to probe the properties of the QGP created in Pb–Pb collisions. Therefore, these measurements play a leading role in the investigation of possible signs of collectivity in p–Pb and pp collisions. Non-flow effects must be considered when performing the cumulants measurements in pp collisions which makes this study challenging.

In this talk, we will present ALICE measurements of the multiplicity dependence of two- and multi-particle cumulants in pp collisions and compare to results from p–Pb and peripheral Pb–Pb collisions. We will show the latest developments in multi-particle cumulant measurements that are able to further suppress non-flow effects. These results shed more light on the nature of the nuclear medium created in high energy pp, p–Pb and Pb–Pb collisions.

Session

Collectivity in high energy collisions

Primary author(s) : Ms. GAJDOSOVA, Katarina (Niels Bohr Institute, University of Copenhagen)

Presenter(s) : Ms. GAJDOSOVA, Katarina (Niels Bohr Institute, University of Copenhagen)

Session Classification : Collectivity in high energy collisions: jets, flow and other aspects (I)