Contribution ID: **48** Type: **Poster**

# Event-by-event dynamical fluctuations of K/π, p/π, and K/p in Pb-Pb collisions with ALICE

*Monday, 5 October 2015 18:45 (5 minutes)*

Non-statistical event-by-event fluctuations in relativistic heavy ion collisions have been proposed as probe of phase instabilities near the QCD phase transition. The observable νdyn, which is given in terms of the moments of identified-particle multiplicity distributions, is used to quantify the magnitude of the dynamical fluctuations in event-by-event measurements of given particle ratios. The ALICE detector at the LHC is well suited for the study of νdyn, due to its excellent particle identification capabilities. Particle identification that is based on the measurement of the specific ionization energy loss dE/dx works well on a statistical basis, however, suffers from ambiguities when applied on the event-by-event level. A novel experimental technique called the "Identity Method" was recently proposed to overcome such limitations. In this contribution, we will present results for νdyn for K/π, p/π, and K/p, which applies the Identity Method to Pb-Pb data from ALICE.

**Primary author:** Mr ARSLANDOK, Mesut (Institut fuer Kernphysik, Goethe University, Frankfurt)

**Presenter:** Mr BASU, Sumit (Variable Energy Cyclotron Centre)

**Session Classification:** Poster session

**Track Classification:** Multiparticle Correlations and Fluctuations