## '2+1' Correlations in Pb–Pb and pp collisions at $\sqrt{s_{\rm NN}}$ = 2.76 TeV with ALICE @ LHC

In the early stages of collisions, hard-scattering of the quarks and gluons from incoming nuclei results in the production of high momentum partons which fragment into collimated sprays of hadrons called "jets". At lower transverse momenta where the event-by-event reconstruction of jets becomes difficult, their event averaged effect generates observable correlations, which have been studied using triggered two-particle angular correlation measurements. To control the di-jet production point, we require two back-to-back trigger particles with different momenta. Using symmetric and asymmetric trigger  $p_T$  combinations, we are making an attempt to control the path lengths traversed by the triggers. These antipodal triggers allow us a simultaneous comparison of the near and away sides which is difficult otherwise due to the background subtraction involved on the away side, and so lets us compare the impact of different kinematic cuts on the fragmentation bias.

In this analysis the relative pseudorapidity and azimuthal angle distributions  $(\Delta \eta - \Delta \phi)$  of particles with respect to both the triggers are constructed, and the yield extracted from a fit to the  $\Delta \eta$  projection. The measurement is done in central and semi-central events for three  $p_T$  combinations of primary and secondary triggers. Heavy ion measurements have been compared with pp reference data which forms a rigorous baseline for correlation measurements. The variation observed between near and away sides will be presented which will shed light on the modification of the  $p_T$  of jet fragments. To further interpret the results in terms of path length dependence, the comparison of these results to JEWEL model simulations will be presented as well

## **Preferred** Track

Correlations and Fluctuations

## Collaboration

ALICE

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