

Angular correlation measurements in Pb-Pb collisions by ALICE

Thursday, June 15, 2017 3:40 PM (20 minutes)

Angular correlation measurements are powerful tools to study jets in a transverse momentum (p_T) regime where jet reconstruction algorithms are difficult to use because of the large fluctuating background. In such measurements, the relative azimuthal angle ($\Delta\varphi$) and relative pseudorapidity ($\Delta\eta$) of particle pairs is measured. Jets manifest themselves as a peak around $(\Delta\varphi, \Delta\eta) = (0, 0)$, and by studying the centrality and momentum dependence of the shape of the peak in heavy-ion collisions, the interaction of the jets with the produced flowing medium can be studied.

In this contribution, results from angular correlation measurements in Pb-Pb collisions from the ALICE experiment will be presented. It will be shown that the near-side peak broadens in central events at low p_T , and that a novel feature, a depletion around $(\Delta\varphi, \Delta\eta) = (0, 0)$, appears at low p_T in the most central events. These results will be compared to results from pp collisions and to Monte Carlo generators to study the effects of the flowing medium in heavy ion collisions.

List of tracks

Fluctuation in initial conditions, collective flow and correlations

Primary authors: KOFARAGO, Monika (Hungarian Academy of Sciences (HU)); ALICE COLLABORATION

Presenter: KOFARAGO, Monika (Hungarian Academy of Sciences (HU))

Session Classification: Fluctuation in initial conditions, collective flow and correlations