



Contribution ID: 144

Type: Poster

Measurement of azimuthal correlations of D mesons with charged particles in pp collisions at $\sqrt{s}=7$ TeV with ALICE at the LHC

Tuesday 15 May 2018 19:10 (30 minutes)

The collisions of heavy ions at ultrarelativistic energies provide an excellent way to study the phase transition from hadronic matter to a deconfined state of quarks and gluons, the Quark-Gluon Plasma (QGP). The ALICE (A Large Ion Collider Experiment) detector at the LHC is designed for the study of the QGP properties. Heavy quarks (charm and beauty), having a large mass, are produced in the initial stages of the collision in hard parton scatterings. Hence, they experience the whole evolution of the hot and dense medium, representing an important tool for its characterization.

The study of angular correlations between D mesons and charged particles in different collision systems provides information about the possible medium-induced modification of charm quark fragmentation into jets. In pp collisions, this measurement allows the study of the production mechanisms, fragmentation and hadronization of charm quarks. In addition, it acts as a reference for p-Pb and Pb-Pb systems.

In this poster, the measurement of azimuthal correlations between D mesons (D^0 , D^+ , D^{*+}) and charged particles in pp collisions at $\sqrt{s} = 7$ TeV will be presented. The D mesons are reconstructed via their hadronic decay channels at midrapidity ($|y| < 0.5$) in the transverse momentum range $3 \leq p_T \leq 16$ GeV/c and correlated to charged particles with $p_T > 0.3$ GeV/c with pseudorapidity $|\eta| < 0.8$. The results are compared with expectations of simulations performed with different event generators.

Content type

Experiment

Collaboration

ALICE

Centralised submission by Collaboration

Presenter name already specified

Author: NAIK, Bharati (IIT- Indian Institute of Technology (IN))

Presenter: NAIK, Bharati (IIT- Indian Institute of Technology (IN))

Session Classification: Poster Session

Track Classification: Open heavy flavour