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Measurement of electrons from beauty hadron decays in pp collisions from $\sqrt{s} = 2.76$ TeV to 13 TeV with ALICE

Beauty quarks, due to their large masses are produced in the initial hard scattering processes of hadronic collisions. They witness the whole evolution of the produced medium and serve as an excellent probes for the QGP. In proton-proton collisions, the measurement of beauty-hadron production cross sections are very important to test the perturbative QCD (pQCD) calculations. In addition, it provides the required reference for Pb-Pb collisions to study the mass dependent energy loss in the medium.

In this contribution the production of electrons from beauty-hadron decays in pp collisions at mid rapidity with ALICE will be presented. The Time Projection Chamber (TPC), Time Of Flight (TOF) and ElectroMagnetic Calorimeter (EMCal) are used for particle identification. The presence of EMCal along with the TPC is exploited to measure the beauty decay electron cross section extending in the high transverse momentum region. The pT-differential production cross section of beauty decay electrons in pp collisions at different centre of mass energy(\sqrt{s}) ranging from 2.76 TeV to 13 TeV measured with ALICE will be presented. In addition, the comparison of these measurements with different models will be shown.

Collaboration (if applicable)

ALICE

Track

Heavy Flavor and Quarkonia

Contribution type

Poster

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