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

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In proton–proton collisions, the measurements of beauty-hadron production cross sections are an effective tool to test the perturbative QCD (pQCD) calculations. In addition, they provide the required reference for measurements performed in Pb–Pb and p–Pb collision systems, in order to study the in-medium mass dependent energy loss and the possible effects of cold nuclear matter, respectively.

In this contribution, the production of electrons from beauty-hadron decays in pp collisions at midrapidity 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-hadron decay electron production cross section in the high transverse momentum region. The p_{T}-differential production cross section of electrons from beauty-hadron decays measured with ALICE in pp collisions at different centre of mass energies $\sqrt{s}$, ranging from 2.76 TeV to 13 TeV will be presented. In addition, the comparison of these measurements with different models will be shown.

Session

Heavy Ions and QCD

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