

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

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In proton-proton (pp) collisions, beauty quarks are produced in hard scattering processes, and therefore their measurements represent an important test of perturbative QCD calculations. Moreover, measurements in pp collisions are needed to provide a baseline for those performed in p-Pb and Pb-Pb collisions. In addition, the production yields as a function of charged-particle multiplicity can give us an insight into multi-parton interactions (MPI) and the interplay between hard and soft mechanisms in particle production.

In this contribution, we report on inclusive and multiplicity-dependent production of electrons from beauty-hadron decays in pp collisions at $\sqrt{s} = 13$ TeV collected by ALICE during LHC Run 2. The inclusive production cross section is compared to pQCD calculations and to a similar measurement of electrons from open heavy-flavour decays in pp collisions at $\sqrt{s} = 13$ TeV. The multiplicity-dependent production yields are compared to those of open heavy-flavour decay electrons in the same collision systems and to model predictions.

Category

Experiment

Collaboration

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