

Strangeness in Quark Matter 2019



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Multiplicity-dependent production of heavy-flavour decay electrons in pp and p-Pb collisions with ALICE at the LHC

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Heavy-flavour production studies in pp collisions, besides providing the necessary baseline for measurements in Pb-Pb collisions, constitute a precision test of perturbative QCD calculations. In complex systems such as p-Pb collisions, it gives insights into the cold nuclear matter (CNM) effects and also characterizes the nuclear parton distribution functions in the low- x region, where gluon saturation sets in. Furthermore, their production as a function of charged-particle multiplicity in pp and p-Pb collisions provides insights into the role of multiple-parton interactions (MPI) and the interplay between hard and soft mechanism in particle production. In p-Pb collisions, the production is also influenced by the concurrent multiple binary nucleon-nucleon collisions.

In this contribution, we will present the measurement of the yield of electrons from heavy-flavor hadron decays at mid-rapidity ($|\eta| < 0.8$) as a function of the transverse momentum and charged-particle multiplicity estimated at mid-rapidity ($|\eta| < 1$) in pp collisions at $\sqrt{s} = 13$ TeV and in p-Pb collisions at $\sqrt{s_{NN}} = 8.16$ TeV.

Collaboration name

ALICE

Track

Heavy Flavour

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