

# 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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