

Production measurements of heavy-quarks in pp collisions at 13 TeV with the ALICE detector.

Heavy-flavour production measurements in pp collisions are important tools to test theoretical models based on perturbative quantum chromodynamics (pQCD) and to investigate the heavy-quark hadronization mechanisms. In ALICE, heavy quarks are measured via the hadronic and electronic decay channels at central rapidity ($|\eta| < 0.9$), and via the muon decay channels at forward ($|\eta| < 0.9$), and via the muon decay channels at forward ($|\eta| < 0.9$), and via the muon decay channels at forward ($|\eta| < 0.9$), and via the muon decay channels at forward rapidity ($-4 < \eta < -2.5$).

In this contribution, the production cross-sections measurements of leptons from heavy-flavour hadron decays are presented and compared to perturbative quantum chromodynamics (pQCD) theoretical calculations. The latest measurements of D^0, D^+, D^{*+} and $D^+ s$ mesons together with the measurements of $\Lambda^+ c, \Xi^0, \Sigma^0, \Sigma^+ c$ and the measurement of $\Omega^0 c$ baryons performed with the ALICE detector at midrapidity in pp collisions at $\sqrt{s} = 13$ TeV are also presented. Measurements of charm-baryon production are crucial to study the charm-quark hadronization mechanisms in a partonic rich environment like the one produced in pp collisions at the LHC energies.

Abstract Category

Particle Physics

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