

Overview of heavy-flavor measurements in ALICE at the LHC for the ALICE Collaboration

The ALICE detector at the LHC is dedicated to the study of the properties of the hot and dense QCD matter (quark-gluon plasma) produced in nucleus-nucleus collisions at ultra-relativistic energies. The heavy flavor (charm and beauty) quarks, having large masses, are produced in hard-parton scatterings at the early stages of the collisions. Their measurements in pp collisions are an important test of perturbative Quantum Chromodynamics (pQCD) and a reference for measurements in p-Pb and Pb-Pb collision systems. Heavy-flavor measurements in Pb-Pb collisions enable studying the properties of the QGP medium by investigating the interaction of its constituents with the heavy quarks traversing it. Studies in p-Pb collisions allow us to disentangle cold nuclear effects. This contribution presents an overview of recent ALICE results for open heavy flavors in pp, p-Pb, and Pb-Pb collision systems.

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