

Status of D-meson measurements in pp collisions at $\sqrt{s} = 13.6$ TeV and Pb–Pb collisions at $\sqrt{s_{NN}} = 5.36$ TeV with ALICE

Friday 19 July 2024 20:40 (20 minutes)

ALICE is the LHC experiment designed for the study of nucleus-nucleus collisions. Its primary goal is to characterize the quark–gluon plasma (QGP), a deconfined state of matter created at extreme temperatures and energy densities. Heavy quarks (charm and beauty) are excellent QGP probes, as they are mostly produced at the earliest collision stages and survive the entire medium evolution, thus allowing us to investigate their interactions with the medium. To do so, heavy-flavour results obtained in Pb–Pb collisions can be compared to those obtained in pp collisions, which serve as a baseline and a test of pQCD calculations.

This poster presents the status of D-meson measurements in pp and Pb–Pb collisions, for different centralities, at $\sqrt{s} = 13.6$ TeV and $\sqrt{s_{NN}} = 5.36$ TeV, respectively, using data from the LHC Run 3. D-mesons are reconstructed from their hadronic decays at central rapidity with the ALICE detector.

Alternate track

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Session Classification: Poster Session 2

Track Classification: 07. Heavy Ions