

Abstract Submitted
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Heavy-flavour production in small systems with ALICE at the LHC PREETI DHANKHER, University of California, Berkeley, ALICE COLLABORATION — Heavy quarks are produced in the initial stages of hadronic collisions via hard scattering processes and experience the complete evolution of the hot and dense medium created in heavy-ion collision, known as quark-gluon plasma. Measurement of their production in pp collisions provides baseline for observations of hot-medium effects in heavy-ion collisions, as well as tests of perturbative QCD calculations. A deeper understanding of heavy-flavour production in Pb–Pb collisions requires a detailed study of Cold Nuclear Matter effects in order to disentangle the role of initial- and final-state effects on their production. Measurements in small systems at high multiplicity recently gained additional interest due to the observation of the signal typical of the heavy-ion phenomenology. To study in detail the (initial- and/or final-state) effects playing a role on these observations, measurement of heavy-flavour production as a function of multiplicity is performed. In this talk, the most recent results on production cross section, nuclear modification factor and multiplicity dependence studies of production of D mesons and heavy-flavour hadron decay electrons at mid-rapidity and of muons at forward rapidity will be presented. The results will be compared with model calculations.

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