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## Open heavy-flavour production as a function of multiplicity in pp and p-Pb collisions

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The measurement of charm and beauty production cross sections in pp collisions provides a reference for heavy-ion studies and a test for perturbative QCD calculations. In p-Pb collisions, open heavy-flavour measurements allow one to assess the effects due to the presence of a nucleus in the initial state, and to investigate the possible presence of final-state effects, such as jet quenching and radial flow. Open heavy-flavour measurements as a function of the multiplicity of charged particles produced in the collision are sensitive to the interplay between hard and soft contributions governing particle production in hadronic collisions and could give insight into the role of multi-parton interactions (MPI), i.e. several hard partonic interactions occurring in a single collision. We present results of open heavy-flavour production measurements in pp and p-Pb collisions with ALICE. These results include the production cross sections of D mesons, reconstructed via hadronic decay channels at mid-rapidity, and of leptons from heavy-flavour hadron decays, namely electrons measured at mid-rapidity and muons at forward rapidity. We will show the measurement of D-meson production as a function of charged-particle multiplicity, comparing the evolution of the per-event yield of D mesons in different multiplicity intervals in the two collision systems. For p-Pb collisions, we present in different multiplicity ranges the D meson nuclear modification factor, defined as the ratio of the D-meson yield in p-Pb and pp collisions divided by the average number of binary nucleon-nucleon collisions.

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