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Open heavy-flavour production in p–Pb collisions measured with ALICE at the LHC ANNELIES VEEN, Univ of Utrecht, ALICE COLLABORATION — Heavy quarks (charm and beauty) are valuable probes for the study of the properties of the Quark-Gluon Plasma formed in high energy Pb–Pb collisions, since they are produced in hard scattering processes in the initial stages of the collision. In p–Pb collisions the production of open heavy flavour can be influenced by Cold Nuclear Matter effects (CNM), such as shadowing, k_T broadening and initial-state energy loss. Studies of the effects on the heavy flavour production in p–Pb, in comparison to that in Pb–Pb collisions, makes it possible to distinguish between cold- and hot-nuclear matter effects.
The open heavy-flavour production is measured in ALICE at the LHC at mid-rapidity via D-meson reconstruction in hadronic decay channels and electrons from heavy-flavour hadron decays, and at forward rapidity via muons from heavy-flavour hadron decays. In this contribution, we present recent measurements on heavy flavour production from p–Pb collisions at $\sqrt{s_{\rm NN}}$ =5.02 TeV collected during Run I and Run II of the LHC. Focussing in particular on the D-meson production cross-section and nuclear modification factor, heavy flavour electron and muon results and possible angular correlations, compared to theoretical model predictions.

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