



Contribution ID: 259

Type: Poster

Multiplicity dependence of D^{*+} -meson production in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV at the LHC

Tuesday, 20 May 2014 16:30 (2 hours)

ALICE's heavy-ion programme is dedicated to the study of the hot, high-density state of matter formed in high-energy nuclear collisions. One of the many probes at its disposal is the production of heavy quarks, namely charm and beauty, since due to their large masses they are produced in the earliest stages of the collision and experience the full evolution of the system. As well as studying the production of leptons from heavy-flavour decays, ALICE's excellent tracking and vertexing capabilities also allow us to fully reconstruct the hadronic decays of the open-charmed D mesons.

In order to disentangle experimental outcomes arising in the hot and dense medium from those occurring due to cold nuclear matter effects, it is also necessary to make measurements in p-Pb collisions. One measurement that can be made in this system is the yield of certain particle species as a function of the multiplicity of charged particles produced in the collisions. Such measurements allow us to investigate the role of multiparton interactions in proton-nucleus collisions at LHC energies, in particular when compared to similar results in pp collisions.

Previous ALICE studies in the charm sector have already found that the production of J/ψ mesons in pp collisions at $\sqrt{s} = 7$ TeV exhibits an increasing yield per event with increasing multiplicity. Similar measurements have also been made for D-meson production in pp collisions. In this poster, we present the ALICE measurements of D^{*+} -meson production as a function of charged-particle multiplicity in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV.

On behalf of collaboration:

ALICE

Primary author: WILKINSON, Jeremy (Ruprecht-Karls-Universitaet Heidelberg (DE))

Presenter: WILKINSON, Jeremy (Ruprecht-Karls-Universitaet Heidelberg (DE))

Session Classification: Poster session

Track Classification: Open Heavy Flavour and Quarkonia