

Strangeness in Quark Matter 2019



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Measurement of prompt and non-prompt J/ψ production at mid-rapidity in p-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with ALICE

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J/ψ mesons have long been proposed as ideal probes capable of providing evidences of the formation of Quark-Gluon Plasma (QGP) in ultra-relativistic heavy-ion collisions. Various Cold Nuclear Matter (CNM) effects are however expected to affect J/ψ production in addition to the modifications due to the presence of the QGP, and the study of p-Pb collisions represents a crucial tool to assess the influence of CNM on J/ψ production. From the analysis of LHC Run 1 data (2009-2013), ALICE produced measurements of J/ψ production in p-Pb collisions at mid-rapidity down to zero transverse momentum (p_T). The statistical separation of the non-prompt J/ψ component resulting from beauty-hadron decays has also been performed down to $p_T = 1.3$ GeV/ c , allowing an evaluation of nuclear effects also on beauty quark production. Data of p-Pb collisions with J/ψ produced at mid-rapidity have been subsequently made available during LHC Run 2 data taking campaign (2015-2018), granting a six-fold increase in luminosity and allowing more precise measurements to be performed.

In this poster, ALICE results for the production of prompt and non-prompt J/ψ in p-Pb collisions at mid-rapidity will be presented. The status of analyses for the measurement of J/ψ production on the Run 2 data sample will also be reported.

Collaboration name

ALICE

Track

Heavy Flavour

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