Contribution ID: **577** Type: **Parallel**

Prompt/Non-prompt J/ψ production in pp collisions at forward and midrapidity with ALICE

Quarkonium production in high-energy hadronic collisions is sensitive to both perturbative and non-perturbative aspects of quantum chromodynamics (QCD) calculations. Charmonium cross section can be split into prompt and non-prompt components, the first corresponding to directly produced charm-anticharm pairs, the second originating from the decay of beauty hadrons. Both components are relevant for the investigation of the properties of the quark-gluon plasma (QGP), with the latter allowing a study the mass dependence of heavy-quarks in-medium energy-loss mechanism. In this contribution the recent measurement of prompt and non-prompt J/ψ carried out by the ALICE Collaboration in pp and Pb–Pb collisions at midrapidity (|y| < 0.8) will be shown, including the newest results from LHC Run 3. Moreover, thanks to the installation of the new muon forward tracker (MFT), prompt/non-prompt charmonium separation is now possible in LHC Run 3 at forward rapidity (2.5 < y < 3.6). Using pp collisions at $\sqrt{s} = 13.6$ TeV, performances for the prompt and non-prompt J/ψ separation at forward rapidity will be discussed. For the first time, preliminary results on the prompt/non-prompt J/ψ fraction will be presented.

Secondary track

Author: COLLABORATION, ALICE

Session Classification: T05

Track Classification: T05 - QCD and Hadronic Physics