Contribution ID: **164** Type: **Oral**

Overview of recent charmonium measurements with ALICE at the LHC

Wednesday 26 April 2023 16:40 (25 minutes)

Charmonia are excellent probes of deconfinement in heavy-ion collisions. Due to different binding energies between J/ψ and ψ(2S),the hot nuclear matter effects have different impact on the production yields of the ground and excited states. The measurements of the J/ψ and ψ(2S) in the same collision system will give an insight to the charmonium production mechanisms in the heavy-ion collisions.

In this talk, I will review the recent charmonium measurements with ALICE, J/ψ and ψ(2S), in Pb–Pb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV. The nuclear modification factors for inclusive as well as prompt and non-prompt J/ψ will be shown as a functions of p_T and centrality at midrapidity. The newly published results on ψ(2S) will also be presented. In addition, I will discuss the recently published results on J/ψ polarization with respect to a quantization axis orthogonal to the event-plane.

Theory / experiment

Experiment

Group or collaboration name

ALICE Collaboration

Primary author: Dr BAI, Xiaozhi (University of Science and Technology of China (USTC))

Presenter: Dr BAI, Xiaozhi (University of Science and Technology of China (USTC))

Session Classification: Parallel Session A

Track Classification: Heavy quarks and quarkonia