

11th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



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Typ: Talk

The measurements of J/ψ production in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with ALICE

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Quarkonia are excellent probes of deconfinement in heavy-ion collisions. For J/ψ , a bound state of $c\bar{c}$ quarks, its production yield is sensitive to color screening and dissociation in the medium. However, at LHC energies, the charmonium regeneration is expected to be significantly larger than at RHIC and SPS energies, since the density of uncorrelated charm-anticharm ($c\bar{c}$) pairs in the medium is larger. On the other hand, the determination of the non-prompt component of the J/ψ production, originating from b-hadron decays, allows one to access the interaction of b-quarks with the QGP. It enables as well for prompt J/ψ measurements a direct comparison with prompt charmonium models.

In this talk, new published inclusive J/ψ yield and nuclear modification factor results at midrapidity and forward rapidity, will be shown in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV. The J/ψ -to- D^0 meson ratio, obtained in central and semicentral collisions, will also be discussed. The preliminary measurements of prompt and non-prompt J/ψ yields and nuclear modification factors, performed at midrapidity in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV, will be presented. The determination of the non-prompt J/ψ fraction extends down to very low p_T with a significantly improved precision compared to previous publications. Results will be compared with available calculations.

Experiment/Theory

ALICE

Affiliation

ALICE

Hauptautor: LU, Pengzhong

Vortragende(r): LU, Pengzhong

Sitzung Einordnung: Parallel: Heavy Flavours & Quarkonia

Track Klassifizierung: Heavy flavor and quarkonia