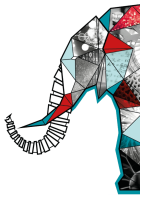
25e Congrès Général de la Société Française de Physique



ID de Contribution: **223** Type: **Poster**

Measurement of an excess in the yield of J/ψ at very low p_T in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with ALICE

In 2015, the ALICE collaboration reported the first excess in the yield of J/ψ at very low transverse momentum ($p_T < 0.3\ GeV/c$) in the forward rapidity region ($2.5 < y < 4$) in peripheral Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV at the CERN LHC. [1] The coherent photo-production is proposed as the potential underlying physics mechanism. This mechanism is the main responsible for low-p_T J/ψ production in ultra-peripheral collisions. However, the observation of a large effect also in more central collisions that are dominated by the hadronic interactions was quite surprising. If the photo-production is confirmed as the origin of the excess, this will open up fundamental questions on the nature of the coherence in collisions where the nuclei break up. Furthermore, the J/ψ from the coherent photo-production might become an additional probe of the Quark and Gluon Plasma. This poster presents the analysis strategy for Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV for which the data sample is expected to be about thirty times larger than at $\sqrt{s_{NN}} = 2.76$ TeV.

References

[1] ALICE Collaboration, J. Adam et al., "Measurement of an excess in the yield of J/ψ at very low p_T in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV", Phys.Rev.Lett.116(2016) 222301, arXiv:1509.08802 [nucl-ex].

Choix de session parallèle

1.3 Physique nucléaire: physique hadronique et QCD

Auteur principal: BUGNON, Ophélie (Subatech)

Orateur: BUGNON, Ophélie (Subatech)

Classification de Session: Séance Poster