

10th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



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Recent ALICE results on photon-induced J/ψ production

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The strong electromagnetic fields generated by ultra-relativistic heavy ions provide the possibility to study photon-induced processes at the LHC in new kinematic regions. ALICE has measured the exclusive and the coherent production of J/ψ in p-Pb and Pb-Pb collisions at a center-of-mass energy of 5.02 TeV. These collisions correspond to photon-proton and photon-Pb interactions, respectively. In these cases, the mass of the charm quark allows for perturbative QCD computations addressing the phenomena of saturation and nuclear shadowing.

An overview of recent ALICE results will be presented. The p-Pb data allow us to study the evolution of the cross section for exclusive production over three orders of magnitude in Bjorken- x . Regarding the Pb-Pb data, there are two types of measurements: in ultra-peripheral and in peripheral collisions. The new data from LHC Run 2 allow us to cover a larger kinematic range with smaller experimental uncertainties than in the past. The measurements are compared with the predictions of available models to discuss the implications of the new data for our understanding of QCD in these regimes. A brief summary of ALICE plans in this field for LHC Run 3 and 4 will also be presented.

Collaboration (if applicable)

ALICE

Track

Initial State

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Contributed Talk

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