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Recent results on ultra-peripheral collisions at the LHC with ALICE

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The ultra-peripheral collisions (UPCs) of relativistic heavy-ion collisions provide a unique opportunity to study the photon induced interactions at the LHC in new kinematic regimes.

The ALICE experiment has measured the coherent photo-nuclear production of the ρ^0 and J/ψ vector mesons in UPCs.

The measurement of ρ vector meson is an excellent tool to study nuclear shadowing effects and the approach to the black-disc limit of QCD, while the J/ψ measurement is also a good tool to study the nuclear shadowing and saturation effects at low-x.

In this contribution, recent results obtained with the data from the LHC Run2 will be presented.

The first measurement of the cross section of the ρ^0 mesons in Xe-Xe at $\sqrt{s_{NN}} = 5.44$ TeV and Pb-Pb UPCs at $\sqrt{s_{NN}} = 5.02$ TeV, and the cross section of the J/ψ mesons and its t-dependence in Pb-Pb UPCs at $\sqrt{s_{NN}} = 5.02$ TeV will be reported.

These results are compared with various model predictions in order to improve our phenomenological understanding of the UPCs.

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