

UPC2025: The second international workshop on the physics of Ultra Peripheral Collisions

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Experimental overview on UPC results from ALICE

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The ALICE Collaboration has extensively studied coherent and incoherent J/ψ photoproduction, as well as coherent ψ' in ultra-peripheral Pb-Pb collisions using the Run 2 data set, including results from exclusive and dissociative J/ψ mesons in ultra-peripheral p-Pb interactions, together also with the $|t|$ -dependence of (in)coherent J/ψ . These measurements, which studied exclusive charmonia photoproduction as a function of e.g. energy, Bjorken- x , rapidity, and neutron emission, provide unique insights into the initial state of protons and ions, with great sensitivity for both gluon saturation and shadowing. The ALICE Collaboration has also carried out various measurements of different final state systems, such as exclusive four pion photoproduction as well as photoproduction of KK pairs, measured for the first time in ultra-peripheral collisions, and even the measurement of the impact-parameter dependence of coherent ρ^0 production. Finally, we will discuss the prospects for these and new measurements using the Run 3 and Run 4 data.

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