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

Contribution ID: 74 Type: not specified

Inclusive UPC charm photoproduction in ALICE

Thursday 12 June 2025 11:20 (20 minutes)

Inelastic photoproduction of charm has been used previously to constrain the proton gluon distribution at low-x, using e-p collisions. Ultra-peripheral heavy-ion collisions provide an opportunity to use the same mechanism to study the less known nuclear gluon distribution. In these collisions, a photon emitted from one nucleus interacts with a gluon in the target nucleus, producing a pair of charm anti-charm quarks. These fragment to open- or hidden-charm hadrons, which are reconstructed. The cross sections and transverse momentum distributions for D mesons and J/psi will be presented, and the results compared to model calculations.

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Session Classification: Inclusive and diffractive processes and photon, proton and nuclear struc-

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