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Centrality dependence in J/Ψ Photoproduction in pp. pA and AA Collisions

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The photoproduction of J/ Ψ is investigated in the coherent collisions at LHC energy ($\sqrt{s} = 5.02$ TeV), for distinct transverse momentum and centrality classes: ultra-peripheral collisions (UPC) and peripheral collisions across different event geometries. An application of the convolution between the photon flux and the photonuclear cross section is explored for UPCs. In the the peripheral regime, different centrality classes were tested (30%-50%, 50%-70%, and 70%-90%) considering an effective photon flux constraining the geometrical region of the nuclei-target . Consistently, an effective photonuclear cross section was applied. The low-x formulation for the distinct geometries, allows the compairison of three dipole models, suited for saturation. Results for both rapidity and transverse momentum distributions are presented and compared to ALICE data showing good agreement.

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