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Exclusive Photoproduction of J/Psi's in Peripheral AA Collisions

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The exclusive photoproduction of the heavy vector mesons
J/ψ
is investigated in the context of
peripheral lead-lead collisions for the energies available at the LHC,
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TeV. In order to evaluate the robustness of the light-cone color dipole formalism, previously tested in the ultraperipheral regime, it was calculated the rapidity distribution as well as the nuclear modification factor for the three centrality classes: 30%-50%, 50%-70% and 70%-90%. In our calculations, three approaches were considered, in which are applied gradually modifications on the components of the cross section of the process. In the comparison with the ALICE measurements, once we corrected for the effective interaction region the photon flux and the photonuclear cross section better agreement with the data is obtained, mainly in the more central regions (30%-50% and 50%-70%) where the incertainty is small.

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