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”Coherent photoproduction of J/ψ in nucleus-nucleus collisions and future perspectives for electron-ion collider ”

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We investigate the exclusive photoproduction of J/ψ mesons in ultraperipheral heavy-ion collisions in the color dipole approach.
We use the color dipole formulation of Glauber-Gribov theory to calculate the diffractive amplitude on the nuclear target. We compare our results to recent published data on exclusive J/ψ production in ultraperipheral lead-lead collisions at √sNN=2.76 and √sNN=5.02TeV. We describe these data well, however at high-γA energies there is room for additional shadowing corrections, corresponding to triple-Pomeron terms or shadowing from large mass diffraction.
It is very interesting to investigate this issue at future measurements at electron-ion collider (EIC) .
It will be crucial for a deeper understanding of the nuclear glue.

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Summary

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