



Contribution ID: 518

Type: Oral

## EPJ Featured Talk: Investigating subnucleonic structures via new measurements of incoherent $J/\psi$ photoproduction in ultra-peripheral Pb–Pb collisions with ALICE

*Tuesday 8 April 2025 09:00 (20 minutes)*

According to quantum chromodynamics, at high energy, hadrons exhibit a dynamic equilibrium between gluon splitting and recombination, known as saturation. Diffractive photonuclear production of  $J/\psi$  vector mesons provides unique insights into the gluon distribution of hadrons. The Mandelstam- $t$  variable, representing the momentum transfer, probes hadron structure within the impact-parameter plane, with different  $t$  ranges sensitive to gluon field dynamics at various spatial scales. In this talk, we will present new ALICE measurements on the energy dependence of incoherent photonuclear production of  $J/\psi$  mesons off lead ions across Mandelstam- $t$  intervals, testing gluon saturation models in an unprecedented way.

### Category

Experiment

### Collaboration (if applicable)

ALICE

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**Session Classification:** Parallel session 15

**Track Classification:** Physics of ultraperipheral collisions