

# DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



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Type: **Parallel talk**

## Coherent and incoherent $J/\psi$ photoproduction in ultra-peripheral Pb-Pb collisions with ALICE

*Thursday, 30 March 2023 14:40 (20 minutes)*

Photon-induced reactions in ultra-peripheral collisions (UPCs) of heavy nuclei at the LHC have been studied using the ALICE detector for several years. The ALICE detector can measure the photoproduction cross section for vector mesons at various rapidities, centre-of-mass energies and collision systems. Beyond the recent ALICE studies of the rapidity and momentum transfer dependence of coherent  $J/\psi$  photoproduction, new results on coherent  $J/\psi$  measurements with forward neutron tagging will be presented for the first time. In addition, new results on the momentum transfer dependence of incoherent  $J/\psi$  photoproduction will also be discussed for the first time. These new results complement coherent  $J/\psi$  measurements and provide additional sensitivity to probing nuclear gluon effects including the presence of subnucleon gluon fluctuations. Additionally, new measurements of the coherent and incoherent  $J/\psi$  polarization will be shown. These new results serve testing the s-channel helicity conservation hypothesis.

### Submitted on behalf of a Collaboration?

Yes

### Participate in poster competition?

No

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**Session Classification:** WG2

**Track Classification:** WG2: Small-x, Diffraction and Vector Mesons