

# 12th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



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Type: **Oral presentation**

## **$J/\psi$ photoproduction and polarization in peripheral Pb-Pb collisions with ALICE**

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Ultrarelativistic heavy-ion collisions generate a powerful electromagnetic field that produces photonuclear reactions. Recently, coherent  $J/\psi$  photoproduction has been observed in nucleus–nucleus (A–A) collisions with nuclear overlap, based on the measurement of an excess of  $J/\psi$  production with respect to hadron-production expectations at very low  $p_T$ . In this context, a polarization measurement can confirm the electromagnetic origin of the very low  $p_T$   $J/\psi$  yield excess, since the produced quarkonium is expected to inherit the transverse polarization of the incoming photon. ALICE can measure inclusive and exclusive quarkonium production down to  $p_T = 0$ . In this contribution, preliminary measurements of the  $y$ -differential cross section and the polarization analysis of coherently photoproduced  $J/\psi$  in peripheral Pb–Pb collisions will be presented together with recent results on coherent  $J/\psi$  photoproduction as a function of centrality. Comparison with models will be shown when available.

### **Category**

Experiment

### **Collaboration**

ALICE

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