Contribution ID: 80

Type: not specified

## Coherent J/psi photoproduction in AA collisions with nuclear overlap from RHIC to LHC energies: theory perspective

Tuesday 10 June 2025 12:00 (20 minutes)

Coherent J/ $\psi$  photoproduction in heavy-ion collisions has emerged as a sensitive probe of both the initial-state gluonic structure of nuclei and the dynamical electromagnetic fields generated by relativistic ions. While traditionally studied in ultra-peripheral collisions (UPCs), recent experimental observations by ALICE and STAR collaborations reveal surprising enhancements in low- $p_T$  J/ $\psi$  yields in AA collisions with significant nuclear overlap—challenging the assumption that coherent photonuclear processes vanish in hadronic collision regimes. This talk presents a comprehensive theoretical framework to address the survival of coherent J/ $\psi$  photoproduction in overlapping AA systems across RHIC and LHC energies. Furthermore, we will delve into an in-depth discussion and critical review of the implications and applications stemming from the linear polarization effects intrinsic to this photoproduction mechanism.

Author:ZHA, Wangmei (University of Science and Technology of China (CN))Presenter:ZHA, Wangmei (University of Science and Technology of China (CN))Session Classification:Exclusive processes and small-x physics

Track Classification: Exclusive processes and small-x physics