

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



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Type: **Parallel talk**

CGC for Ultra-Peripheral Pb+Pb Collisions at the Large Hadron Collider: a more realistic calculation

Thursday, 30 March 2023 16:50 (20 minutes)

We provide the first calculation of two-gluon production at mid-rapidity in ultra-peripheral collisions in the Color Glass Condensate framework. To estimate systematic uncertainty associated with poor understanding of the wave function of the nearly real photon, we consider two diametrically different models: the dilute quark-antiquark dipole approximation and a vector meson, in which color charge density is approximated by McLerran-Venugopalan model. In the experimentally relevant range, the target nucleus can be faithfully approximated by a highly saturated state. This simplification enables us to perform efficient numerical simulations and extract the two-gluon correlation functions and the associated azimuthal harmonics.

Submitted on behalf of a Collaboration?

No

Participate in poster competition?

No

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