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## Onset of gluon saturation through incoherent J/psi production at large |t|

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We predict the possibility of detecting signatures of the long-sought saturation in ultraperipheral heavy-ion collisions at currently accessible energies of the LHC. Saturation, as predicted by QCD at high energies, occurs when gluon densities in hadrons become so large that gluons begin to recombine with each other, stabilizing their population. To probe these effects, we study incoherent vector meson production, which is sensitive to fluctuations in the partonic structure of the target.

The energy-dependent Hotspot model, based on the color dipole approach, incorporates subnucleonic degrees of freedom known as hot spots. These hot spots represent regions of high gluonic density, and their positions fluctuate event by event.

Using the energy-dependent Hotspot model, we propose studying the energy dependence of incoherent photoproduction of vector mesons in diffractive processes at various values of the Mandelstam-t variable. Since t is related to the transverse distribution of color charges, analyzing its energy dependence within specific t ranges allows us to isolate fluctuations across different size scales, highlighting the hot spot contributions where saturation is expected.

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