Effects of CGC on J/ψ production in nucleus-nucleus collisions

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We calculate the production of J/ψ in Au-Au collisions at RHIC by taking into account gluon saturation effects in the nuclei. The new J/ψ production mechanism, provided by gluon saturation and CGC formation [1], gives a stronger suppression at forward rapidity, as a function of the centrality, than at midrapidity, in agreement with recent RHIC data. We compare our results with RHIC data and give predictions for LHC energies.

References

[1] D. Kharzeev and K. Tuchin, Nucl. Phys. A **770** (2006) 40 [arXiv:hep-ph/0510358].