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Gaussian rapidity profile from collisions in Glasma simulations

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I present our work on simulating the emergence of the Glasma in the early stages of heavy ion collisions in full 3+1 dimensions. In the color glass condensate framework incoming nuclei are usually assumed to be infinitely thin Lorentz-contracted pancakes which leads to boost-invariant rapidity profiles of the resulting energy density after the collision. We break boost invariance by allowing for a finite thickness of the incoming nuclei along the beam direction and obtain Gaussian-like rapidity profiles already at tree level. The profiles resemble strong coupling results and allow for comparison with experimental data of pion multiplicities as obtained at RHIC.

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