The impact of glasma on heavy quark spectra and correlations

$\int \mathcal{D}A$vramescu

T. Lappi, H. Mäntysaari
University of Jyväskylä

D. Müller
TU Wien

V. Greco
University of Catania

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Centre of Excellence in Quark Matter

JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

HELSINKI INSTITUTE OF PHYSICS

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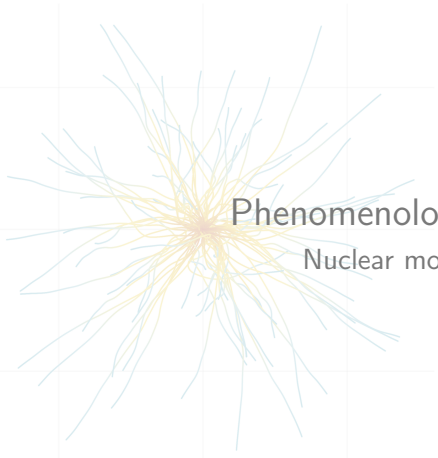
Hard Probes 2024

Outline

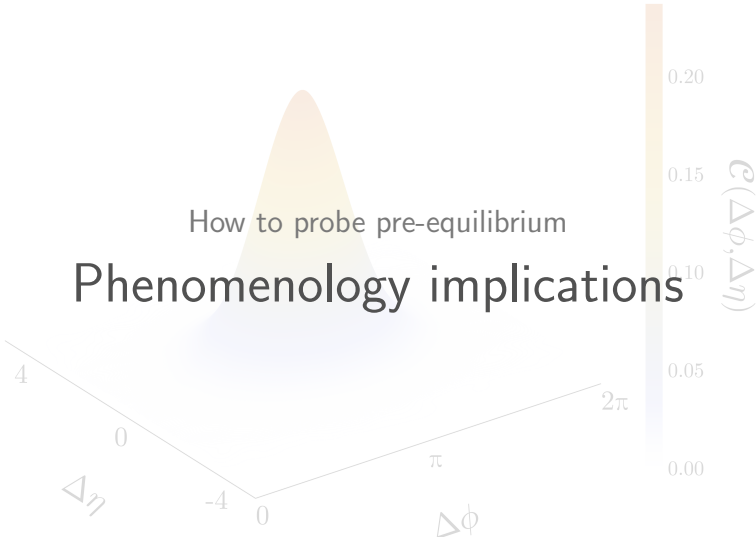


Phenomenology implications

Nuclear modification factor

How to probe pre-equilibrium

Phenomenology implications



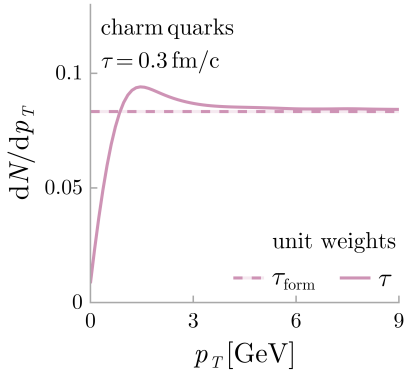
Effect of glasma on spectra

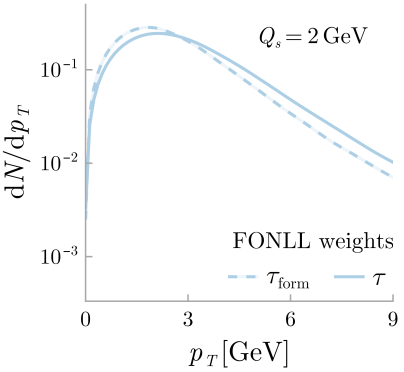
Effect of glasma

- Initial flat p_T distribution
- p_T migration from small to large p_T

Effect of initial spectrum

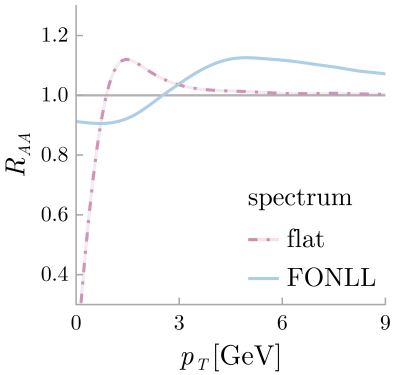
- Initial pQCD FONLL p_T spectrum
- More particles at intermediate p_T





Nuclear modification factor

Extraction of R_{AA} in glasma



R_{AA} in glasma

- **"Ratio of AA to pp normalized spectra"**

$$R_{AA}(\tau) = \frac{1}{A^2}\frac{\sigma_{\text{tot}}^{AA}}{\sigma_{\text{tot}}^{pp}}\frac{\frac{\mathrm{d}N}{\mathrm{d}p_T}(\tau; pp/AA)}{\frac{\mathrm{d}N^{pp}}{\mathrm{d}p_T}}$$