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## Event-by-event jet suppression, anisotropy and hard-soft tomography

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A consistent description of high  $p_T$  particle suppression ( $R_{AA}$ ) and azimuthal anisotropy  $v_2$  has been a puzzle in the study of jet quenching, pointing to some non-perturbative native of jet transport. Event-by-event single inclusive jet suppression and azimuthal anisotropy are studied within the Linear Boltzmann Transport (LBT) model for jet propagation in QGP medium from 3+1D hydrodynamic evolution with fluctuating initial conditions. We demonstrate that LBT can describe both the single inclusive jet suppression and azimuthal anisotropy with a single adjustable parameter- effective strong coupling constant  $\alpha_s$ . This indicate observed jet quenching puzzle might be caused by non-perturbative phenomenon in hadronization at intermediate  $p_T$ . We also studied the energy and centrality dependence and the effect of fluctuation as compared to a smooth hydro evolution. A linear relationship is found between high  $p_T$  jet anisotropy due to jet quenching and soft hadron anisotropy from hydrodynamic expansion

### Content type

Theory

### Collaboration

### Centralised submission by Collaboration

Presenter name already specified

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