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Azimuthal Harmonics at RHIC and LHC energies: Competition between Initial State Bremsstrahlung and Final State Hydrodynamics

Monday, 28 September 2015 16:10 (20 minutes)

Recent azimuthal correlation data from d+Au and Au+Au collisions at RHIC energies and cumulant azimuthal harmonics in p+Pb and PbPb at LHC energies display very similar size and characteristics challenging the uniqueness of local equilibrium hydrodynamical interpretation of these data. We show that in p+A collisions the azimuthal harmonics arising from initial-state non-abelian interference effects associated with multiple projectile and target beam jets are remarkably similar to the measured data in experiments and predictions from final state perfect fluid models. The corresponding GLVB model description for pA collisions [1] and its numerical interpretation and inclusion will be shortly summarized and discussed.

[1] M. Gyulassy, P. Levai, I. Vitev, T.S. Biro, Phys. Rev. D90 (2014) 054025.

Primary author: LEVAI, Peter (Hungarian Academy of Sciences (HU))

Co-authors: GYULASSY, Miklos (Columbia University); BIRO, Tamas Sandor (MTA Wigner RCP)

Presenter: LEVAI, Peter (Hungarian Academy of Sciences (HU))

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