

Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

Initial-State Bremsstrahlung versus Final-State Hydrodynamic Sources of Azimuthal Harmonics at RHIC and LHC¹ MIKLOS GYULASSY, Columbia University, PETER LEVAI, MTA WIGNER Research Centre for Physics Budapest, IVAN VITEV, Los Alamos National Lab, TAMAS BIRO, MTA WIGNER Research Centre for Physics Budapest — Recent azimuthal correlation data from the Beam Energy Scan (BES) and d+Au runs at RHIC/BNL and, the surprising similarity of multiparticle cumulant azimuthal harmonics in p+Pb and Pb+Pb at LHC have challenged the uniqueness of local equilibrium “perfect fluid” interpretations of those data. We report results derived in arXiv:1405.7825 [hep-ph] on azimuthal harmonics arising from initial-state non-abelian “wave interference” effects predicted by perturbative QCD sourced by Color Scintillation Arrays (CSA) of color antennas associated with multiple projectile and target soft beam jets. We find a remarkable similarity between azimuthal harmonics sourced by initial state CSA and those predicted with final state perfect fluid models of high energy p+A reactions.

¹Supported in part by the US Department of Energy, Office of Science, Office of Nuclear Physics

Miklos Gyulassy
Columbia University

Date submitted: 08 Aug 2014

Electronic form version 1.4