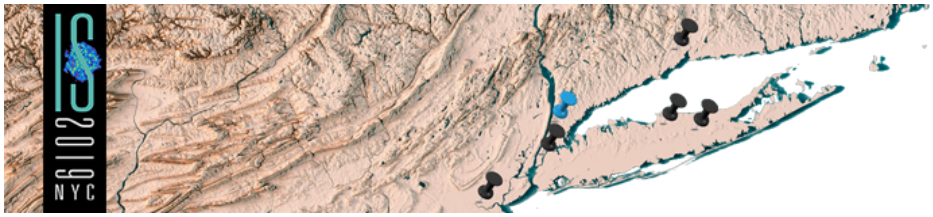

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Investigation of the linear and mode-coupled flow harmonics in Au+Au collisions at $\sqrt{s_{NN}}$ = 200 GeV

Tuesday, June 25, 2019 4:02 PM (1 minute)

The elliptic and triangular flow coefficients, v_2 and v_3, are expected to be driven by the initial anisotropy coefficients of the same order, ϵ_2 and ϵ_3, respectively. However, the higher order flow coefficients, v_n (n $>$ 3), are comprised of linear contributions driven by ϵ_n, as well as mode-coupled contributions derived from the lower order coefficients. The study of these disparate contributions to v_n can give important insight to discern initial-state models and to constrain the temperature-dependent specific shear viscosity, $\frac{\eta}{s}(T)$. In recent work, we have made detailed measurements of both the linear and the mode-coupled coefficients, v_n (n=4,5), in Au+Au collisions ($\sqrt{s_{NN}}$ =200 GeV) using 2- and multi-particle correlations based on the standard and subevent cumulant methods. These measurements will be presented as a function of centrality, p_T and particle species. The comparisons to the LHC measurements and different theoretical calculations will be presented. The implications of these comparisons for initial-state models and $\frac{\eta}{s}(T)$ will be discussed.

Primary author: Dr ABDELRAHMAN, Niseem (Department of Physics, University of Illinois at Chicago, Chicago)

Presenter: Dr ABDELRAHMAN, Niseem (Department of Physics, University of Illinois at Chicago, Chicago)

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