

Heavy ion initial conditions and correlations between higher moments in the spatial anisotropy

Fluctuations in the initial conditions for relativistic heavy ion collisions are proving to be crucial to understanding final state flow and jet quenching observables. The initial geometry has been parameterized in terms of moments in the spatial anisotropy (i.e. $e_2, e_3, e_4, e_5, \dots$), and it has been stated in multiple published articles that the vector directions of odd moments are uncorrelated with both the even moments and the reaction plane angle. This poster details the results from a Monte Carlo Glauber calculation (available in arXiv:1011.1853v1) where these statements are shown to be incorrect. Instead a substantial nonzero correlation is found to be present between the even and odd moments in peripheral Au+Au collisions where the number of participating nucleons is small. The dependence of the correlation between the higher moments will be shown as a function of centrality and beam species.

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