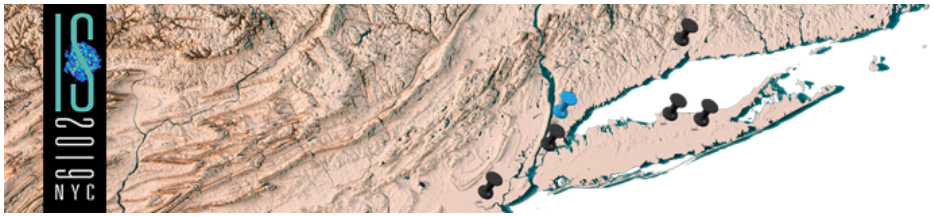

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Linear and non-linear response of two-particle correlations to initial-geometry fluctuations

Tuesday, 25 June 2019 16:08 (1 minute)

We investigate the importance of different features of the initial geometry to anisotropic flow fluctuations in heavy-ion collisions. To that end, we explore the hydrodynamic response of differential flow harmonics $v_n(p_T)$ to generalized eccentricities $\epsilon_{n,m}$ of the initial density profile within a realistic hydrodynamic model. Special attention is paid to two-particle angular correlations, characterized in detail by the principal-component analysis (PCA). We address the relevance of non-linear response, as well as the stability of the results against the inclusion of extra eccentricities. Additionally, we study new effects from multiplicity fluctuations, which could lead to redundancies in the experimental PCA data.

Primary authors: Dr HIPPERT, Mauricio (Universidade de Sao Paulo); Dr DOBRIGKEIT CHINELLATO, David (Universidade Estadual de Campinas); Dr LUZUM, Matthew (Universidade de Sao Paulo); Dr NORONHA, Jorge (Universidade de Sao Paulo); Dr NUNES DA SILVA, Tiago (Universidade Federal de Santa Catarina); Dr TAKAHASHI, Jun (Universidade Estadual de Campinas)

Presenter: Dr HIPPERT, Mauricio (Universidade de Sao Paulo)

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