

Understanding flow response using linear and cubic corrections in heavy-ion collisions

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We study the relation between elliptic flow, v_2 and the initial eccentricity, ϵ_2 , in heavy-ion collisions, using hydrodynamic simulations. Significant deviations from linear eccentricity scaling are seen in more peripheral collisions. We identify the mechanism responsible for these deviations as a cubic response, which we argue is a generic property of the hydrodynamic response to the initial density profile. The cubic response increases elliptic flow fluctuations, thereby improving agreement of initial condition models with experimental data.

Tipo de Apresentação

Poster

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