

# Impact of nuclear deformation on longitudinal flow decorrelations in high-energy isobar collisions

*Tuesday 25 April 2023 17:00 (20 minutes)*

Fluctuations of harmonic flow along pseudorapidity  $\eta$ , known as flow decorrelations, is an important probe of the initial condition and final state evolution of the quark-gluon plasma. We show that the flow decorrelations are sensitive to the deformations of the colliding nuclei. This sensitivity is revealed clearly by comparing flow decorrelations between collisions of isobars,  $^{96}\text{Zr}+^{96}\text{Zr}$  and  $^{96}\text{Ru}+^{96}\text{Ru}$ , which have different deformations. Longitudinal flow decorrelations in heavy-ion collisions is a new tool to probe the structure of colliding nuclei.

## Theory / experiment

Theory

## Group or collaboration name

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