Longitudinal flow decorrelation in Xe+Xe and $p+$Pb collisions with the ATLAS detector

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ATLAS measurements of longitudinal flow decorrelation using two- and four-particle correlations for harmonics $n=2$ and 3 in Xe+Xe and $p+$Pb collisions covering a wide range of transverse momenta and collision centrality are presented and compared with Pb+Pb collisions. The measurements are performed using data from Xe+Xe collisions at 5.44 TeV, Pb+Pb collisions at 5.02 TeV, and $p+$Pb collisions at 5.02 and 8.16 TeV. The energy dependence in $p+$Pb collisions and the system-size dependence of decorrelation are studied. The measurements provide better understanding of the initial state of heavy-ion collisions and will help in developing full three-dimensional initial-state models.

Collaboration (if applicable)

ATLAS

Track

Initial State

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Poster

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