



Contribution ID: 763

Type: **Parallel Talk**

## Measurement of collective dynamics in pp, Xe+Xe, and Pb+Pb collisions with the ATLAS detector

*Friday, 8 July 2022 17:15 (15 minutes)*

This talk presents ATLAS measurements of collective, flow phenomena in a variety of collision systems, including pp collisions at 13 TeV, Xe+Xe collisions at 5.44 TeV, and Pb+Pb collisions at 5.02 TeV. These include measurements of  $v_n$ -[pT] correlations in Xe+Xe and Pb+Pb, which carry important information about the initial-state geometry of the Quark-Gluon Plasma and can potentially shed light on any quadrupole deformation in the Xe nucleus; measurements of flow decorrelations differential in rapidity, which probe the longitudinal structure of the colliding system; and measurements of the sensitivity of collective behavior in pp collisions to the presence of jets, which seek to distinguish the role that semi-hard processes play in the origin of these phenomena in small systems. These measurements furthermore provide stringent tests of the theoretical understanding of the initial state in heavy ion collisions.

### In-person participation

Yes

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