

# Recent flow and correlation measurements in large and small collision systems with ATLAS

*Thursday, 18 July 2024 10:45 (17 minutes)*

This talk presents a comprehensive overview of recent ATLAS measurements of collective flow phenomena in a variety of collision systems. Measurements of the mean, variance, and skewness of the distribution of event-by-event per-particle average transverse momentum,  $\langle p_T \rangle$  are reported for Pb+Pb collisions at 5.02 TeV and Xe+Xe collisions at 5.44 TeV. These measurements give insight into the nature of the spatial energy fluctuations in the QGP produced in heavy-ion collisions. Measurements of the azimuthal anisotropy of high- $p_T$  particles in Pb+Pb collisions, using two and four-particle cumulants are presented. The high- $p_T$  measurements provide information on the path-length dependence of parton energy loss in the QGP. Two sets of measurements that investigate if the presence of jets affects the flow-like behavior observed in pp collisions are also presented.

## Alternate track

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Yes

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