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Study of the long-range azimuthal correlations in pp and p+Pb collisions with the ATLAS detector at the LHC

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ATLAS measurement of azimuthal correlations between particle pairs at large pseudorapidity separation in pp and pPb collisions are presented. The data were collected using a combination of the minimum-bias and high track-multiplicity triggers. A detailed study of the dependence of two-particle correlations on the charged particle multiplicity, transverse momentum of the pair constituents and the pseudorapidity separation between particles forming a pair is shown. Measurements of multi-particle cumulants in the azimuthal angles of produced particles in wide pseudorapidity ($|\eta| < 2.5$) and multiplicity ranges, with the aim to extract a single particle anisotropy coefficient, v_1 - v_5 , are also presented. These measurements can help to understand the origin of the long-range correlations seen in high-multiplicity pp and p+Pb collisions.

On behalf of collaboration:

ATLAS

Primary author: WOZNIAK, Krzysztof Wieslaw (Polish Academy of Sciences (PL))

Presenter: WOZNIAK, Krzysztof Wieslaw (Polish Academy of Sciences (PL))

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