

# Pseudorapidity dependence of charged-particle anisotropic flow in Pb–Pb collisions at $\sqrt{s_{\text{NN}}}=2.76$ TeV in ALICE

Anisotropic flow is one of the key observables in heavy-ion collisions and puts constraints on the QGP equation of state. In particular, the pseudorapidity ( $\eta$ ) dependence of anisotropic flow coefficients provides information on the hydrodynamical response of the system in the context of variations in the particle density.

The ALICE detector provides unprecedented angular coverage at the LHC ( $-3.5 < \eta < 5.0$ ,  $0 < \varphi < 2\pi$ ). We present results for  $v_2\{2\}$ ,  $v_2\{4\}$ ,  $v_3\{2\}$ , and  $v_4\{2\}$  as a function of  $\eta$  in Pb–Pb collisions at  $\sqrt{s_{\text{NN}}}=2.76$  TeV from our recent paper [1]. We also present anisotropic flow coefficients as function of centrality, and investigate how the shape of the  $\eta$  dependence evolves with centrality along with the contribution of flow fluctuations as a function of  $\eta$ . Additionally, comparisons to hydrodynamical predictions and transport models as well as an investigation of the scaling behavior of harmonics to  $dN_{\text{ch}}/d\eta$  are done. Finally, we compare our results to RHIC in order to see whether longitudinal scaling holds at LHC energies.

[1] J. Adam *et al.* [ALICE Collaboration], “Pseudorapidity dependence of the anisotropic flow of charged particles in Pb–Pb collisions at  $\sqrt{s_{\text{NN}}} = 2.76$  TeV,” arXiv:1605.02035 [nucl-ex].

## Preferred Track

Correlations and Fluctuations

## Collaboration

ALICE

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