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Type: **Talk**

Anisotropic flow in ultra-central Pb–Pb collisions at $\sqrt{s_{NN}} = 5.36$ TeV with ALICE

Monday 21 July 2025 17:00 (25 minutes)

Anisotropic flow measurements in heavy-ion collisions are sensitive to the spatial distribution of the initial state, and QGP transport properties such as the shear viscosity to entropy density ratio (η/s). Hydrodynamic models successfully describe such flow measurements over a wide centrality range. However, the hydrodynamic description of anisotropic flow deviates from the data in ultra-central collisions. An octupole deformation of the $\{208\}\text{Pb}$ nuclei has been proposed as a remedy to improve the modeling of the measured $v_3\{2\}/v_2\{2\}$ ratio. Such a deformation should manifest in triangular flow fluctuations via measurements of the $v_3\{4\}/v_3\{2\}$ ratio.

In this talk, we present multi-particle elliptic flow measurements of the coefficient $v_n\{m\}$ in Pb–Pb collisions with LHC Run 3 data over the full centrality range. We will also present measurements from ultra-central collisions and discuss whether there is experimental evidence for an octupole deformation.

Internet talk

No

Is this an abstract from experimental collaboration?

Yes

Name of experiment and experimental site

ALICE, CERN

Is the speaker for that presentation defined?

Yes

Details

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