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Anisotropic flow and related phenomena in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with ALICE ($15' + 5'$)

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ALICE (A Large Ion Collider Experiment) is designed and optimised to study the properties of the Quark-Gluon Plasma (QGP), a new state of matter, which is expected to be created at the high energy densities reached at the LHC. One of the key observables used to characterize the properties of the QGP is the azimuthal anisotropy in particle production. This so-called anisotropic flow is sensitive to the transport properties and equation of state of the QGP. In this presentation, we report the first measurements of anisotropic flow in Pb-Pb collisions at $\sqrt{s_{NN}} = 5.02$ TeV with ALICE and compare them with both theoretical predictions and experimental measurements at lower energies and other collision systems. This provides a unique opportunity to test the validity of the hydrodynamic paradigm and to further constraint the key transport parameters of the QGP.

Primary author: MARGUTTI, Jacopo (Utrecht University (NL))

Co-authors: BILANDZIC, Ante (Technische Universitaet Muenchen (DE)); TIMMINS, Anthony Robert (University of Houston (US)); ZHOU, You (Niels Bohr Institute (DK))

Presenter: MARGUTTI, Jacopo (Utrecht University (NL))

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