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## Characterising the modification of charged jets using using event shape engineering in Pb-Pb Collisions at $\sqrt{s_{\mathrm{NN}}} = 5.36$ TeV with the ALICE Detector

During Run 3, the ALICE experiment has continued its exploration of the quark-gluon plasma (QGP) through the study of heavy-ion collisions at unprecedented energies of  $\sqrt{s_{\mathrm{NN}}}=5.36$  TeV in Pb–Pb collisions. This study investigates the in-medium modification of jet observables relative to the event plane as a function of certain event properties (event shape engineering), such as the ellipticity of the event. The analysis focuses on jets reconstructed with a resolution parameter of R=0.2,0.4 and examines the centrality interval of 30–50\%. Our aim is to better quantify the correlation between the path length traversed by jets in the QGP and their energy loss, providing deeper insights into the underlying dynamics of jet-medium interactions.

## Category

Experiment

## Collaboration (if applicable)

ALICE

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