

# 12th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions

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Type: **Oral presentation**

## New measurements of inclusive jet suppression and jet $v_2$ in Pb–Pb collisions with ALICE

*Tuesday 24 September 2024 15:00 (20 minutes)*

We report new ALICE measurements of inclusive charged-particle jet yield suppression  $R_{AA}$  and jet azimuthal anisotropy  $v_2$  in Pb–Pb collisions. The  $R_{AA}$  measurement is carried out in central Pb–Pb collisions at  $\sqrt{s_{NN}} = 5.02$  TeV, with uncorrelated background corrected statistically using an event-mixing approach. The charged-particle jet  $R_{AA}$  measurements have high precision over a broad kinematic range, including very low jet  $p_T$ , for jet resolution parameters  $R = 0.2$  to  $0.5$ . Comparison of these  $R_{AA}$  measurements and their  $R$  dependence to theoretical calculations provide new insight into jet quenching phenomenology and its underlying mechanism. We also report measurements of inclusive charged-particle jet  $v_2$  in semi-central Pb–Pb collisions using new Run 3 data, quantifying the jet yield dependence relative to event-plane orientation that may probe the pathlength dependence of jet energy loss.

### Category

Experiment

### Collaboration

ALICE

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**Session Classification:** Parallel 17: jet  $R_{AA}$ , correlation

**Track Classification:** 1. Jets modification and medium response