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Type: **Parallel Talk**

Analysis of the apparent nuclear modification in peripheral 5.02 TeV Pb-Pb collisions with ALICE

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We present charged particle spectra at midrapidity measured in lead-lead collisions at a center-of-mass energy per nucleon pair of 5.02 TeV with ALICE, in twenty centrality classes ranging from most central (0-5%) to very peripheral (95-100%) collisions. At high transverse momentum ($8 < p_T < 30$ GeV/c), the average nuclear modification factor (R_{AA}) is found to increase from 0-5% central to 75-85% peripheral collisions, beyond which it strongly falls to very low values for the most peripheral collisions (95-100%). Our findings support the idea that peripheral collisions are affected by biases caused by the event selection and collision geometry, which can lead to an apparent nuclear modification in peripheral collisions even in the absence of jet quenching. The results in peripheral collisions are consistent with a PYTHIA-based model without nuclear modification. Our study provides an explanation of the observation that R_{AA} is lower than unity in peripheral Pb-Pb collisions, but equal to one in p-Pb collisions at similar charged particle multiplicity.

Content type

Experiment

Collaboration

ALICE

Centralised submission by Collaboration

Presenter name already specified

Primary author: ALICE COLLABORATION

Presenter: KNICHEL, Michael Linus (CERN)

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