

# Multiplicity dependent and inside-jet measurement of light neutral mesons in pp collisions with ALICE

Thursday 18 July 2024 12:00 (15 minutes)

This talk presents the ALICE measurements of  $\pi^0$ ,  $\eta$ , and  $\omega$  meson production in pp collisions at 13 TeV. The results are given for several multiplicity classes, each for an unprecedented  $p_T$  coverage. Furthermore, the measurement of  $\pi^0$  and  $\eta$  mesons inside of jets will be shown.

ALICE measurements of neutral meson production in pp, p+Pb and Pb+Pb collisions give constraints to parton distribution functions (PDF) and FF, and provide essential background corrections for direct photon and dilepton analyses.

Observables previously attributed to the formation of a QGP in Pb–Pb have been measured in high-multiplicity pp and p–Pb collisions by ALICE and CMS, suggesting a continuous evolution from small to large collision systems. In addition, the correlation of neutral mesons and jets measured in pp collisions provides constraints on the meson FF.

## Alternate track

1. Heavy Ions

## I read the instructions above

Yes

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**Session Classification:** Strong interactions and Hadron Physics

**Track Classification:** 06. Strong Interactions and Hadron Physics