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Type: Talk

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

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This talk presents measurements by the ALICE Collaboration of neutral π^0 , η , and ω meson production in proton-proton collisions at $\sqrt{s} = 13$ TeV. Such measurements can constrain the proton parton distribution functions (PDF) and fragmentation functions (FF), and provide input for background corrections of direct photon and dilepton analyses. Measurements of π^0 and η meson distributions within and outside of reconstructed jets are reported, which constrain meson FFs. Distributions of inclusive meson production in multiplicity-selected pp collisions are also reported. Phenomena that are characteristic of quark-gluon plasma (QGP) formation, notably strangeness enhancement and the presence of collective flow, have been observed previously in high-multiplicity pp collisions. These new measurements provide additional insight into particle production and hadron chemistry, and the formation of the QGP in small systems.

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Classification de thématique: Collective effects in small systems