

# 10th International Conference on Hard and Electromagnetic Probes of High-Energy Nuclear Collisions



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## Measurement of Neutral Mesons in pp Collisions at $\sqrt{s} = 13$ TeV with ALICE

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The precise measurement of the neutral meson production in pp collisions can be used as a constrain for fragmentation functions and parton density functions needed by pQCD calculations. Additionally, those measurements can be used as an input for direct photon analyses. Moreover, the dependence of the neutral meson cross section on the event particle multiplicity and on the event sphericity provides a baseline to study the presence of effects that could be interpreted as the creation of the quark-gluon plasma in the collision, as other measurements might indicate.

The reconstruction of neutral mesons via their two photon-decay channel can be realized in the ALICE experiment with several complementary methods, including the calorimeters and the TPC. The combination of these methods allows for a large  $p_T$  coverage as well as small statistical and systematic uncertainties.

In this poster, the invariant cross sections as well as the multiplicity and sphericity dependencies of the  $\pi^0$  and  $\eta$   $p_T$  spectra in pp collisions at  $\sqrt{s} = 13$  TeV with ALICE will be presented.

### Collaboration (if applicable)

ALICE

### Track

Jets and High Momentum Hadrons

### Contribution type

Poster

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