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## Measurement of low mass dileptons in ALICE

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The ALICE experiment is optimized to the study of the quark-gluon plasma (QGP), a state of matter where, due to high temperature and density, chiral symmetry is restored, and quarks and gluons are deconfined. In order to obtain information on its properties, it is particularly valuable to study the lepton pair production, as leptons can decouple from the plasma at any stage of its evolution and carry information about the medium properties at the time of their emission, since they do not interact strongly. In particular, the production of dileptons is a promising tool for the understanding of the chiral symmetry restoration and the thermodynamical properties of the QGP.

To differentiate possible medium contributions to the dilepton yield in nucleus–nucleus collisions from those from hadron decays, studies in pp and p-A collision systems are necessary to obtain a medium-free reference. These studies can also be used to study charm and beauty production, which are an excellent test of perturbative quantum chromodynamics (pQCD) predictions.

In this presentation, we will report on the latest results for low mass dilepton production measured with the ALICE detector in various collision systems at mid- and forward rapidity. All the measurements are compared to the expected dilepton yields from known hadronic sources and model calculations. Finally, we will discuss the prospects and future measurements.

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