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Low-mass dielectron measurement in ALICE at the LHC

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Dileptons and photons are unique tools to study the space-time evolution of the hot and dense matter created in ultra-relativistic heavy-ion collisions. Their main sources are hard QCD processes (prompt photons), thermal production and semi-leptonic heavy-flavour decays. They carry undistorted information about the various stages of the collision as they are either produced at early times (prompt) or in the QGP phase (thermal) and have negligible final state interactions.Dileptons from heavy-flavour decays also bring information on the early stages, when heavy quark production takes place.
In this contribution, we will present results from the recent measurements of e^+e^- pair production in pp, p–Pb and Pb–Pb collisions at the center-of-mass energy $\sqrt{s_{\rm NN}}$ = 5.02 TeV. Furthermore, our results on dielectrons at low $p_{\rm T,ee}$ in pp collisions at $\sqrt{s}$ = 13 TeV and in peripheral Pb–Pb collisions will be presented and compared with theoretical models.

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