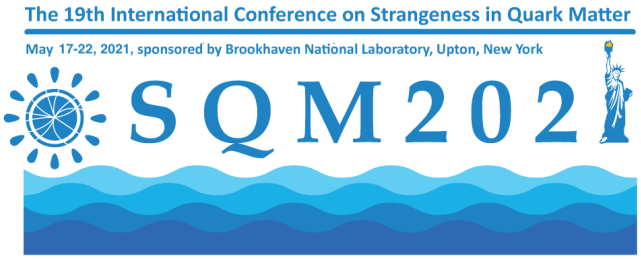

Contribution ID: **50** Type: **Experimental talk**

Low-mass dielectron measurements with ALICE at the LHC

Tuesday, May 18, 2021 9:30 AM (20 minutes)

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. They are produced continuously by a variety of processes, in particular prompt and thermal photons and semi-leptonic heavy-flavour hadron decays, during the entire history of the collision and traverse the medium with negligible final state interaction. So they can carry undistorted information on early stages of the collision. In this contribution, we will present results from the recent measurements of e^+e^- pair production in pp and p–Pb collisions at the center-of-mass energy $\sqrt{s_{NN}}$ = 5.02 TeV. Charm and beauty cross sections are extracted to investigate possible cold nuclear matter effects such as shadowing by comparing estimates of the nuclear modification factor R_{pPb} obtained with different sets of nuclear parton distribution functions. Furthermore, our results on dielectrons at low $p_{T,ee}$ in pp collisions at $\sqrt{s}$= 13 TeV and in Pb–Pb collisions at $\sqrt{s_{NN}}$ = 5.02 TeV will be presented and compared to expectations from calculations including Bremsstrahlung (for pp collisions) and photoproduction (for Pb–Pb collisions).

Collaboration

ALICE

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