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Measurement of low-mass dielectrons in minimum-bias and high-multiplicity pp collisions at 13 TeV with ALICE

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Electron-positron pairs are a unique experimental tool to investigate the hot and dense medium created in ultra-relativistic heavy-ion collisions. Such pairs are produced during all stages of the collision and do not interact strongly. Therefore, they carry information about the medium properties and the whole space-time evolution of the system.

Measurements of dielectron production in minimum-bias proton-proton collisions provide an important vacuum reference for any modifications observed in heavy-ion collisions. Moreover, the measurement of e^+e^- pairs from semi-leptonic decays of correlated heavy-flavour hadrons in the intermediate-mass region (1.2 < mee < 2.9 GeV/ c^2) allow further studies and understandings of the primordial heavy-flavour production. Finally, recent studies of proton-proton collisions with high charged-particle multiplicities showed interesting results similar to the observations previously done in heavy-ion collisions. Measurements of low-mass dielectrons could provide further insight into the underlying physics processes.

In this poster we present the latest results of the dielectron analysis with ALICE in pp collisions at $\sqrt{s}=13$ TeV. A particular focus of the discussion is put on the modification of dielectron spectrum in pp collisions collected with a trigger on high charged-particle multiplicities compared to the minimum-bias events.

Content type

Experiment

Collaboration

ALICE

Centralised submission by Collaboration

Presenter name already specified

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