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Measurement of low-mass dielectrons in pp collisions at $\sqrt{s} = 13$ TeV with ALICE

Low-mass dielectrons are a unique experimental tool to investigate the hot and dense medium created in ultra-relativistic heavy-ion collisions. Since they are created during all stages of the collision and do not interact strongly, they carry information about the medium properties unperturbed by strong final-state effects allowing us to probe the whole space-time evolution of the system.

Measurement of dielectron production in pp collisions serves as important vacuum reference to quantify modifications observed in heavy-ion collisions. It also provides complementary information on heavy-flavour production via correlated semi-leptonic decays. Recent studies of proton-proton collisions with high charged-particle multiplicities showed surprising results similar to the observations previously seen in heavy-ion collisions. Measurements of low-mass dielectrons could provide additional information regarding the underlying physics processes.

In this poster we present the current status of the dielectron analysis with ALICE central barrel in pp collisions at an unprecedented centre-of-mass energy of 13 TeV. A particular focus of the discussion will be put on the dielectron production in pp collisions collected with a trigger on high charged-particle multiplicities.

Preferred Track

Electromagnetic Probes

Collaboration

ALICE

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