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Dielectron production in high-multiplicity pp collisions at $sqrt{s}$ = 13 TeV with ALICE

Monday 24 April 2023 15:05 (25 minutes)

Dielectron production is a powerful tool to investigate the properties of the quark-gluon plasma created in relativistic heavy-ion collisions, as they carry information about the temperature of the medium and its space-time evolution without any distortion due to final-state interactions. If a medium is created in such small colliding systems, it should give rise to an additional contribution of electromagnetic radiation in the direct photon spectrum. For each real direct photon production mechanism, an associated process producing a virtual photon which converts to a low-mass dielectron pair exists as well. These processes, referred to as internal conversions, allow for the measurement of virtual direct photons at low transverse momentum, which is where the thermal radiation signal sits. In this talk, the measurement of virtual photon production in minimum-bias and high-multiplicity pp collisions at $sqrt{s}$ = 13 TeV using the full ALICE Run 2 dataset will be presented.

Theory / experiment

Experiment

Group or collaboration name

ALICE

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