

# Measurement of the nuclear modification factor of electrons from heavy-flavour hadron decays in Pb-Pb collisions with ALICE

Heavy quarks (charm and beauty) are produced primarily in the initial hard partonic interactions in heavy-ion collisions.

Since they propagate through and interact with the hot and dense QCD matter, measurements of the heavy-flavour production provide relevant information on the early stage of the collisions and parton-medium interaction.

A strong suppression of heavy-flavour hadron production has been observed in the most central heavy-ion collisions with respect to binary-scaled pp collisions, and it is thought to be due to energy loss of heavy flavours in the dense matter.

This poster presents measurements of electrons from heavy-flavour decays at central rapidity in Pb-Pb collisions.

The dominant source at low  $p_T$  is composed of electrons from charm-hadron decays, while at high  $p_T$  electrons from beauty-hadron decays represents a large contribution.

Thus, the measurement is sensitive to energy loss of charm and beauty in the dense matter.

The  $p_T$  dependence of the nuclear modification factor of electrons from heavy-flavour hadron decays in Pb-Pb collisions at  $\sqrt{s_{NN}} = 2.76$  TeV is shown up to 18 GeV/ $c$  in the most central collisions.

The centrality dependence of the nuclear modification factor will also be shown.

The measurements at  $\sqrt{s_{NN}} = 5.02$  TeV and the perspectives for separating electrons from beauty-hadron decays will be presented.

## Preferred Track

Open Heavy Flavors

## Collaboration

ALICE

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