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Elliptic flow of high transverse momentum electrons from heavy-flavour decays in Pb-Pb collisions at $\sqrt{s_{NN}}=2.76$ TeV measured by ALICE

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Heavy quarks, charm and bottom, are produced in early stages of heavy-ion collisions. Propagating through the created matter they serve as a probe of the dynamics of the strongly-interacting, hot and dense plasma of quarks and gluons (QGP).

The transverse momentum dependence of the elliptic flow (v_2) of heavy quarks is sensitive to the properties of the QGP.

A non-zero v_2 of low transverse momentum electrons from semi-leptonic decays of heavy flavours indicates a collective motion of the heavy quarks with respect to the bulk of the created matter. Whereas, the high transverse momentum v_2 is sensitive to the path length dependence of heavy-quark energy loss within the QGP.

We present measurements of heavy-flavour electron v_2 in Pb-Pb collisions at $\sqrt{s_{NN}} = 2.76$ TeV by the ALICE experiment at mid-rapidity. In 2011, the Electromagnetic Calorimeter (EMCal) provided a dedicated online trigger for measurements of high momentum electrons in Pb-Pb collisions. The electrons were identified in these triggered events using the Time Projection Chamber (TPC) and the Electromagnetic Calorimeter (EMCal). The heavy-flavour electron v_2 will be shown as a function of the transverse momentum of the decay electrons.

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