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## Study of the production of B-decay electrons at high momentum in pp collisions at $\sqrt{s}=7$ TeV using secondary vertex reconstruction in ALICE

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High-energy heavy-ion collisions at the LHC allow for the study of the properties of the quark-gluon plasma (QGP). Heavy quarks, charm and bottom, produced in the initial hard scattering processes of the collision are excellent probes of the QGP.

When heavy quarks traverse the QGP they are expected to lose energy and such energy loss is predicted to be smaller than for gluons and light quarks. On the other hand, recent experimental data indicate larger energy loss than expected. Heavy flavour production can be studied using electrons from semi-leptonic decays of D and B mesons. The separation of electrons from these two sources (charm and bottom) is of crucial importance to address the expected mass dependence of energy loss. In this poster, we present the measurement of electrons from bottom in the transverse momentum range of 7-12 GeV in 7 TeV p-p collisions. The ALICE EMCal detector possesses outstanding particle identification for electrons at high pT. Two-track secondary vertices with these electrons and surrounding charged tracks are reconstructed, exploiting the tracking precision provided by the Inner Tracking System, and are used to select displaced decay vertices of B mesons. The cross section for bottom-decay electrons is compared to FONLL pQCD predictions and it serves as a reference for studies of B meson suppression in Pb-Pb collisions.

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