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## Jet-like heavy-flavour particle correlations in ALICE

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The energy loss of partons is predicted to be a sensitive probe of the QCD matter created in high energy nucleus-nucleus collisions since its magnitude depends strongly on the colour charge density of the matter traversed. In particular, the understanding of the flavour dependent coupling of quarks and the modification of their fragmentation function give essential information on the properties of the medium.

Due to their large mass, heavy quarks are believed to be predominantly produced in the initial state of the collision and, therefore, probe the complete space-time evolution of the expanding medium. Recent RHIC results on single electron production in nucleus-nucleus collisions have shown that the yield at high transverse momentum is suppressed to the same level as observed for light-quark hadrons, which was not expected due to the dead-cone effect.

Heavy-quark particle azimuthal angular correlations allow studying the fragmentation function of charm and bottom quarks separately, where high- $p_T$  decay electrons are associated with open charmed mesons. The precision on secondary vertex finding in the ALICE Inner Tracker System will play a key role for the reconstruction of the decay products.

First simulation studies and current experimental preparations in the ALICE experiment will be presented.

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