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Heavy-flavour jets in ALICE

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Heavy-flavour quarks are considered to be effective probes of the Quark-Gluon Plasma (QGP) produced in ultra-relativistic heavy-ion collisions. Since heavy-flavour quarks have a large mass, their production takes place mostly in initial hard scatterings, and it is calculable using perturbative QCD. Thus, heavy flavour quarks can be considered as ideal self-generated penetrating probes of the created medium and utilized to investigate mass-dependent properties of in-medium parton energy loss or cold nuclear matter.

In particular the measurement of heavy-flavour jet production in pp, besides beeing a natural reference for Pb-Pb studies, allow testing pQCD calculations and models of charm fragmentation in vacuum. In addition, similar measurements in p-Pb collisions allow assessing the importance of cold nuclear matter effects. The ALICE experiment at the LHC exploits its excellent particle tracking capabilities, that allow for a precise jet reconstruction and for the identification of D and B-hadron decay vertices, displaced hundreds of micrometers from the primary interaction vertex. In the talk we will report on our heavy-flavour jet measurements done in p-Pb and pp collisions.

Primary author: ISAKOV, Artem (Acad. of Sciences of the Czech Rep. (CZ))

Presenter: ISAKOV, Artem (Acad. of Sciences of the Czech Rep. (CZ))

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