



Contribution ID: 106

Type: Oral

## OPEN CHARM AND CHARM-TAGGED JETS PRODUCTION WITH ALICE AT LHC

*Thursday 10 September 2020 14:30 (20 minutes)*

Charm quarks are mostly produced in hard partonic scattering processes in the early stages of a heavy-ion collision, before the quark-gluon plasma (QGP) is formed. Because of their large mass the production cross section can be calculated using perturbative quantum chromodynamics down to zero transverse momentum. Therefore, they are ideal probes of the properties of this hot, dense, and strongly interacting medium.

Measurements of heavy-flavour tagged jets bring more relevant information of the initial parton kinematics than traditional hadron measurements and can provide information on heavy-quark energy loss in the QGP, in particular on how the radiated energy is dissipated in the medium. Moreover, the study of charm-baryon production in heavy-ion collisions provides unique information on hadronization mechanism.

This talk focuses on the latest results of charm-tagged jets and open charm production with the ALICE detector at the LHC.

**Author:** JAKUB KVAPIL FOR THE ALICE COLLABORATION

**Presenter:** KVAPIL J. (University of Birmingham, UK)

**Session Classification:** Parallel sessions