

# Model study of jet fragmentation transverse momentum distributions in pp collisions using D0-meson tagged jets.

Tuesday 25 April 2023 17:00 (20 minutes)

The fragmentation of partons is studied using the jet fragmentation transverse momentum,  $j_{\perp T}$ . The  $j_{\perp T}$  is defined as the perpendicular component of the momentum of the constituent particle with respect to reconstructed jet momentum,  $\vec{p}_{\perp jet}$ . The  $j_T$  provides a measurement of the transverse momentum spread of the jet fragments. Recently, the direct dead-cone effect was measured by ALICE in terms of the splitting angle of jet fragments by comparing the D0 meson-tagged jets and inclusive jets. The effect arises due to the conservation of angular momentum during the gluon emission and is significant for low-energy heavy-flavour quarks. In this model study, we explore the dead cone effect in a frame of  $j_T$  as  $j_{\perp T}$  is a good tool to measure the spread of jet fragments for D0 meson tagged jets with respect to inclusive jets in momentum space.

## Theory / experiment

Experiment

## Group or collaboration name

**Primary author:** LEE, Hyungjun (Sungkyunkwan University (KR))

**Presenter:** LEE, Hyungjun (Sungkyunkwan University (KR))

**Session Classification:** Poster Session

**Track Classification:** Jets and medium response