

# DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 117

Type: **Parallel talk**

## Studying Transverse-Momentum-Dependent Fragmentation at LHCb

*Thursday 30 March 2023 15:40 (20 minutes)*

The Large Hadron Collider beauty (LHCb) experiment provides an opportunity to study hadronization processes, how particular hadrons are formed from scattered quarks and gluons (partons), in the forward region,  $2 < \eta < 5$ . Going beyond traditional collinear non-perturbative fragmentation functions (FFs), transverse-momentum-dependent (TMD) FFs provide multidimensional information on the hadronization process. The excellent hadron identification capabilities of LHCb allow for a wealth of possible hadronization measurements. Recent results measuring TMD jet FFs for identified charged pions, kaons, and protons in a predominantly light quark jet sample will be presented. Ongoing measurements of TMD hadronization in heavy-flavor-tagged jets as well as the polarization of inclusively produced  $\Lambda$  and  $\bar{\Lambda}$ , sensitive to the polarizing TMD FF, will additionally be discussed.

### Submitted on behalf of a Collaboration?

Yes

### Participate in poster competition?

**Primary authors:** LEE, Sook Hyun; LEE, sookhyun

**Presenters:** LEE, Sook Hyun; LEE, sookhyun

**Session Classification:** WG5

**Track Classification:** WG5: Spin and 3D Structure