

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



Contribution ID: 19

Type: **Parallel talk**

## Target jet substructure and correlation

*Tuesday 28 March 2023 14:00 (20 minutes)*

We discuss the reconstruction of target jet and the framework of quantifying its internal substructure. Due to momentum and charge conservation, target and current correlation can be exploited which significantly constrains the event-wide particle distributions. We demonstrate this method using Pythia simulations of electron-proton collisions in the context of identifying the flavor of the struck quark jet. We also quantify the detector requirement for systematically covering the target jet region in order to exploit such information, which will be useful for forward detector designs. Extensions to electron-ion collisions and studies using BeAGLE simulations will be discussed.

### Submitted on behalf of a Collaboration?

No

### Participate in poster competition?

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