

Universality and universality-breaking effects in factorized e^+e^- hadroproduction cross sections

Thursday, 28 November 2019 11:30 (20 minutes)

Recent BELLE measurements provide the cross section for single hadron production from e^+e^- annihilations, differential in the hadron transverse momentum with respect to the thrust axis.

Universality breaking effects due to process-dependent soft factors make it very difficult to relate this cross section to that corresponding to hadron-pair production in e^+e^- annihilations, where TMD fragmentation functions are defined

through the so-called “square-root definition”.

I will examine this correspondence in the framework of CSS factorization and provide the sketch of a scheme that might allow to relate 1-jet to 2-jet e^+e^- cross sections, neatly separating soft and collinear non-perturbative effects from the terms which can be calculated using a perturbative approach.

Primary author: SIMONELLI, Andrea (Istituto Nazionale di Fisica Nucleare)

Presenter: SIMONELLI, Andrea (Istituto Nazionale di Fisica Nucleare)

Session Classification: Thursday 2