Contribution ID: **12**   Type: **not specified**

Investigating transverse momentum distributions with jets

Monday 16 September 2019 16:55 (25 minutes)

In this talk we investigate the use of jets to measure transverse momentum distributions. We study the effect of the election of the axis in the description of the jet. Critically, for an axis insensitive to recoil, the so called Winner-Take-All axis, the jet TMD has the same double-scale renormalization group evolution as TMD fragmentation functions for all radii R. This fact means that TMD fragmentation functions that appear in factorization theorems for processes with hadrons in the final state may then simply be replaced by the jet TMDs we calculate, and all ingredients to perform the resummation to next-to-next-to-next-to-leading logarithmic accuracy are available. Some numerical results for interesting cases as dijet momentum decorrelation and (un)polarized semi-inclusive deep inelastic scattering (SIDIS) with a jet in the final state are studied and presented. This last case allows to find a clean method to probe the intrinsic transverse momentum of quarks and gluons in the proton that is less sensitive to final-state nonperturbative effects.

Author: G. REYES, Daniel (Complutense University of Madrid)

Presenter: G. REYES, Daniel (Complutense University of Madrid)

Session Classification: Parallel 2

Track Classification: Jet physics