

Fragmentation of hadrons and photons inside jets

Wednesday, 12 September 2018 18:00 (20 minutes)

We discuss the processes $pp \rightarrow (\text{jet } h) X$ and $pp \rightarrow (\gamma h) X$, for which a specific hadron or photon is observed inside a fully reconstructed jet. We present NLO results for the corresponding cross sections and show that the results can be cast into simple and systematic forms based on suitable universal jet functions. We present phenomenological results for experiments at the LHC and at RHIC which suggest that the processes should enable sensitive probes of fragmentation functions, especially of the so far little known fragmentation functions for photons. We also touch on QCD threshold resummation calculations for the cross sections.

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