

Abstract Submitted
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Accessing Unpolarized and Polarized Fragmentation Functions at Belle FRANCESCA GIORDANO, MARTIN LEITGAB, University of Illinois at Urbana-Champaign, BELLE COLLABORATION — Fragmentation functions (FFs) describe the formation of final state particles from a partonic initial state and are directly related to the intriguing QCD phenomenon of confinement. Precise knowledge of these functions is a key ingredient in accessing quantities such as the nucleon spin structure in semi-inclusive deep inelastic scattering and proton-proton collisions. However, FFs can currently not be determined from Quantum Chromodynamics first principles and have to be extracted from experimental data. The Belle experiment at KEK, Japan, provides a large data sample for high precision measurements of unpolarized and polarized FFs. Final results of a measurements of spin-independent FFs for identified pions and kaons will be presented. In addition, we will report on the status of an analysis of the kaon transverse-momentum-dependent Collins FF, which describes the correlation between the transverse polarization of the fragmenting quark and the momentum direction of the produced hadron.

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