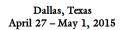
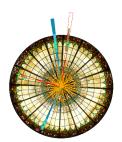
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Recent fragmentation function measurements at Belle

Tuesday 28 April 2015 10:45 (20 minutes)

Fragmentation functions are fundamental objects that describe the process by which partons hadronize to colorless hadrons.

Precision measurements of fragmentation functions are necessary for the extraction of most aspects of the nucleon structure from semi-inclusive deep inelastic scattering and p+p collision data.

Examples are transverse polarization dependent fragmentation functions that are needed to access the transverse spin structure of the proton and the measurement of the intrinsic transverse momentum dependence of unpolarized fragmentation functions that is needed to access non-collinear aspects of the nucleon structure. Beyond providing crucial input for our studies of the partonic structure of the nucleon, fragmentation functions can also be used to study fundamental aspects of non-perturbative QCD, such as TMD evolution. The cleanest access to fragmentation functions can be gained using e+e- annihilation data. The Belle experiment at KEK collected more than 1 ab ^{-1} of data near the Upsilon(4S) resonance, several orders of magnitude

more than was available before the start of the B-factories. This talk will highlight recent results of the Belle fragmentation function measurement program and will give an outlook to future possibilities with the Belle II detector.

Primary author: VOSSEN, Anselm (Indiana University)

Presenter: VOSSEN, Anselm (Indiana University)Session Classification: WG6 Spin Physics

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