

# Exploring SIDIS kinematics regions at Jefferson Lab 22 GeV

*Tuesday, 10 December 2024 14:30 (15 minutes)*

Exploration of regions of hadron production in SIDIS depends strongly on the energy span and the luminosity of experimental measurements. In this talk I will present the future opportunities at Jefferson Lab upgrade at 22 GeV on the basis of the “affinity” to each relevant kinematic region (TMD, central, collinear). One of the key aspects of the

experimental program of Jefferson Lab is the exploration of the three-dimensional structure of the nucleon encoded in the TMD distribution and fragmentation functions and the corresponding factorization at low transverse momenta of the produced hadrons. The study of “affinity” shows that the proposed energy, doubled with respect to the existing

upgrade, is going to enable a thorough mapping of the collinear and TMD regions of hadron production as well as the central region, which embeds the transition from one to the other.

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