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Insights from and Prospects for Belle (II) and JLab[1]

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Semi-inclusive deep inelastic scattering (SIDIS), where a lepton scatters off a quasi-free quark in the nucleon which subsequently hadronizes, is one of the most important tools to probe the spin structure of the nucleon. A recent upgrade of the JLab facility to be able to deliver a polarized electron beam up to 12 GeV enables high precision studies of the valence region of the nucleon, where spin effects are significant. Since quarks cannot be detected directly, detailed knowledge of the hadronization process, described by fragmentation functions, is required to infer their properties from the hadrons detected in the final state. To this end, a program to determine fragmentation functions from e^+e^- annihilation has been underway at the Belle experiment and will continue at its successor, the new Belle II experiment. This talk will discuss recent developments and future plans at JLab and Belle (II) relevant for our understanding of the spin structure of the nucleon.

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