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Exclusive Jets in Deep Inelastic Scattering CHRISTOPHER LEE, Los Alamos National Laboratory, DAEKYOUNG KANG, IAIN STEWART, Massachusetts Institute of Technology — Near x=1, final states in deep inelastic scattering have a single collimated jet of hadrons. We consider events away from this limit, but with a restriction on the final state requiring that it be two-jet-like in the center-of-momentum frame, with one jet along the incident proton direction. This "beam" jet is likely to have been formed by initial state radiation (ISR). This environment provides a relatively clean way to study the nature of ISR, in contrast to pp collisions at LHC, and provides an additional sensitive probe of the parton distributions inside the proton. We use soft collinear effective theory to predict the jet mass distributions to NNLL (next-to-next-to-leading-logarithmic) accuracy, the highest achieved to date in DIS.

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