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Electroproduction in the Target Fragmentation Region HARUT AVAGYAN, Jefferson Lab — The Semi-Inclusive DIS process in the Target Fragmentation Region (TFR), when the hadron is produced in the fragmentation process of the target remnants, can be described through the so-called Fracture Functions (FFs). They represent the joint probability of producing the final hadron from the target remnants, when a parton of the target nucleon is struck by the virtual photon in a hard scattering process. Like the ordinary parton distribution functions, the FFs are universal objects, thus they can be measured in one experiment at a given hard scale and then used to make predictions for other experiments, at another hard scale. Measurements of the Lambda multiplicities and polarization asymmetries in TFR, in particular, will provide information on corresponding Fracture Functions. The study of its Q^2 dependence at JLab and EIC also will test the perturbative framework implied by Fracture Functions, simultaneously encoding the information on the interacting parton and on the fragmentation of the spectator system. We will present ongoing studies of electroproduction in TFR at Jefferson Lab, and proposed future measurement at upgraded JLab and Electron Ion Collider.

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