Measurement of Deeply Virtual π^0 Production off ⁴He

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Deeply virtual meson production and Compton scattering on nucleons are proven prime reactions to progress our understanding of partonic structure via Transverse Momentum and Generalized Parton Distribution frameworks. Their extension to nuclei is of particular interest, with the possibilty of revealing new information on the modification of partonic structure in nuclear media. In Hall-B at Jefferson Lab, we have the first opportunity to exclusively measure such reactions on the 4 He nucleus, ideal due to its simplicity, high density, and lack of (iso)spin. A 6 GeV longitundinally polarized electron beam and gaseous 4 He target, combined with the large acceptance CLAS detector system, augmented by a radial time projection chamber for nuclear recoils and small calorimeter for forward photons, makes this possible. New experimental data on exclusive deeply virtual π^0 production off 4 He will be presented.