

Abstract Submitted
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π^0 electroproduction in semi-inclusive deep inelastic scattering off D, C, Fe, Pb TAI SIYA MINEEVA, University of Connecticut, Storrs, CT, WILL BROOKS, Universidad Tecnica Federico Santa Maria, Valparaiso, Chile, KYUNGSEON JOO, MAURIZIO UNGARO, University of Connecticut, Storrs, CT, CLAS COLLABORATION — Measurement of neutral pion electroproduction is being performed in semi-inclusive deep inelastic scattering off deuterium, carbon, iron, and lead targets. The data were taken with the CLAS detector in Jefferson Lab using a 5.014 GeV electron beam. The two targets, liquid deuterium plus a solid foil, were positioned in the beam simultaneously. Hadronic multiplicity ratios $R_A^{\pi^0}$ and transverse momentum broadening distributions Δp_T^2 were measured as a function of (z_h, ν, Q^2, p_T) kinematic bins. These results provide new insights into the phenomena of hadron formation through the access to the average lifetime of the quasi-free quark and time required to form full hadronic wave function. The status of data analysis as well as preliminary results of multiplicity ratios will be presented.

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