Abstract Submitted
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$^4He(e,e'p)X$ at $Q^2 = 2(GeV/c)^2$ and $x_B = 1.24$[1] SOPHIA IQBAL, KONRAD ANIOL, California State University, Los Angeles, FATIHA BENMOKHTAR, Christopher Newport University, JAVIER RODRIGUEZ VIGNOTE, Universidad Complutense de Madrid, TJNAF HALL A COLLABORATION — A detailed study of the $^4He(e,e'p)^3H$ reaction at large Q^2 and Bjorken x reveals a striking dependence of the shape of the missing energy spectrum on the missing momentum. A realistic simulation using only the kinematical constraints of the high resolution spectrometers(HRS) in Hall A of Jefferson Lab gives a very poor representation of the shape of the missing energy spectrum for the triton ground state. The large acceptances of the HRS yields a simulated width of 13 MeV for the ^3H ground state compared to an experimental width of 6 MeV. A significant improvement in the shape of the simulated spectrum with the data is achieved when dynamical relativistic theoretical cross sections are included in the simulation. Spectrum shapes and cross sections as a function of missing momentum will be compared to theoretical models using relativistic mean field wave functions for ^4He and ^3H.

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