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Kaon Electroproduction at low Q^2 and W=2.2 GeV off hydrogen ARMANDO ACHA, PETE MARKOWITZ, Florida International University , JLAB, HALL A COLLABORATION — A measurement of the H(e,e'K) reaction was performed at Hall A, TJNAF as part of the hypernuclear experiment E94-107. One important ingredient to the hypernuclear cross section calculation is the elementary cross section for production of hyperons, Λ and Σ^0. This was measured using a hydrogen (i.e. a proton) target. Data was taken at very low Q^2 ($\sim$0.07 GeV^2) and W$\sim$2.2 GeV. Kaons were detected along the direction of $\mathbf{q}$, the momentum transferred by the incident electron ($\Theta_{CM} \sim 6^o$). In addition, there is not much data available for electroproduction of hyperons at low Q^2 and Θ_{CM} and the available theoretical models differ a lot in this kinematical region of W. The measurement of the elementary cross section will help not only in the hypernuclear spectroscopy studies but also in constraining existing theoretical models for the elementary reaction. Measurements of the differential cross sections and the Σ^0/Λ production ratio will be reported as well as their results binned in Q^2 ,W and Θ_{CM} to understand the dependence on these variables. Details of the calculations and results will be shown.

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