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Differential cross section of the $p(e,e'K^+)\Lambda/\Sigma^0$ reaction at $Q^2 \simeq 0.5$ [$(\mathbf{GeV}/c)^2$][1] KAZUKI OKUYAMA, Tohoku University, GP-PU, FRANCO GARIBALDI, INFN, PETE MARKOWITZ, FIU, SATOSHI NAKAMURA, Tohoku University, JOERG REINHOLD, FIU, LIGUANG TANG, Hampton University, JLab, GUIDO URCIUOLI, INFN, THE JLAB HYPERNUCLEAR COLLABORATION — We have performed high resolution mass spectroscopy of hypernuclei with the $(e,e'K^+)$ reaction using the high intensity electron beam of CEBAF at Thomas Jefferson National Accelerator Facility (JLab). Although hyperons electroproduction elementary process at low Q^2 is indispensable for the hypernuclear research, both quality and quantity of data in forward angles are far from satisfactory. In the $(e,e'K^+)$ reaction, protons are converted into hyperons, so this makes it possible to measure the cross section of the $p(e,e'K^+)\Lambda/\Sigma^0$ reaction on a gas H_2 target. We deduced the differential cross section of the $p(e,e'K^+)\Lambda/\Sigma^0$ reaction with calibration data of the latest hypernuclear experiment (JLab E12-17-003). These data were collected at Experimental Hall A using two high-resolution magnetic spectrometers, HRS's, and we measured the momentum vectors of the kaons and scattered electrons. They correspond to data sets of $W \simeq 3.0$ [GeV] and $Q^2 \simeq 0.5$ [$(\mathrm{GeV}/c)^2$]. In this presentation, I will report the result of the analysis for the $p(e,e'K^+)\Lambda/\Sigma^0$ reaction.

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