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High Resolution 1P-Shell Hypernuclear Spectroscopy at JLAB, HALL A (E94-107) ARMANDO ACHA, PETE MARKOWITZ, Florida International University, HALL A COLLABORATION — Information about the force between nucleons and strange baryons, i.e. the Λ-N interaction, can be obtained by studying the spectroscopy of nuclei where a nucleon is replaced by a Lambda hyperon to form a bound state. Hypernuclear spectroscopy via electromagnetic induced reaction has been measured in Hall A at Jefferson Lab on 1p-shell nuclei, C^{12}, Be^{9} and O^{16} . The reaction constitutes an innovative experimental approach to study hypernuclei, providing an alternative to the hadronic induced reactions studied so far. Jefferson Lab's electron beam features and the available experimental equipment in Hall A offered a unique opportunity to perform this experiment. Among the features needed are a narrow beam energy spread (σE/E $10E^{-5}$), high resolution spectrometers (missing energy resolution less than 500 KeV FWHM) and good particle identification. Modifications were made to the Hall A standard apparatus: two superconducting septum magnets were added to the spectrometer systems to allow particle detection at very forward angles. The particle identification for the experiment required separating kaons from large pion and proton backgrounds, and electrons from pion backgrounds. Preliminary results with a missing energy resolution of 750 KeV FWHM show good correlation with available theoretical models. Details about results will be shown.

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