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Longitudinal and Transverse Response Functions from Kaon Electroproduction off Hydrogen PETE MARKOWITZ, FIU, KAON COLLABORATION, HALL A COLLABORATION — Exclusive $H(e,e'\gamma)K\Lambda$ data were taken in 2001 - 2002 in Hall A at the Thomas Jefferson National Accelerator Facility during experiment E98-108. Electrons and kaons were detected in coincidence with the two High Resolution Spectrometers (HRS) in Hall A. The kaon arm was specially equipped with two aerogel Čerenkov threshold detectors, designed to separately provide pion and proton particle separation thus allowing kaon identification. Data were taken close to $t=t_{min}$, or at a minimum angle between the kaon and the virtual photon, $\theta_{CM}^{k\gamma} \Rightarrow 0$. This talk presents the final results of a Rosenbluth separation of the cross section and the longitudinal and transverse responses. The data have been compared to calculations using various kaon electromagnetic form factors. Longitudinal and transverse responses show separate sensitivity to varying the form factor at the kinematics of the experiment. This comparison constrains the kaon form factor, albeit in a model dependent fashion.

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