

Abstract Submitted
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Measurement of σ_T , σ_L , and the ratio σ_L/σ_T in kaon electroproduction using CLAS BRIAN RAUE, Florida International University, CLAS COLLABORATION — Measurements of the differential cross section $\frac{d\sigma}{d\Omega_K}$ for $p(e, e'K^+)\Lambda/\Sigma^0$ have been done using the CEBAF Large Acceptance Spectrometer (CLAS) at Jefferson Lab. The data were taken with beam energies of 2.567, 4.056, and 4.247 GeV and covered the kinematic ranges of $0.5 \leq Q^2 \leq 2.5$ GeV² and W from threshold up to 2.5 GeV. The overlap in Q^2 and W for the different beam energies allows a separation of the longitudinal and transverse contributions to the unpolarized cross section. The separation was done using both the Rosenbluth technique and a simultaneous $\epsilon - \phi$ fit. These results cover a wide range of $\cos\theta_K^*$ and are the first to include measurements away from $\cos\theta_K^* = 1$. The results of this analysis will be compared to previous results obtained by Rosenbluth separations as well as results obtained from hyperon transferred polarization measurements at 2.567 GeV. We will also show comparisons to current theoretical descriptions of kaon electroproduction and discuss the implications.

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