Abstract Submitted
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$\Sigma(1385)$ photoproduction on a proton target at Jefferson Lab LEI GUO, Jefferson Lab, CLAS COLLABORATION — Previous investigation of the $J^P = \frac{3}{2}^- \Lambda(1520)$ decay in the Gottfried-Jackson (GJ) frame has suggested the dominance of $K$ exchange in the eletroproduction data ($ep \rightarrow e'K^+\Lambda(1520)$) as opposed to the strong contribution of $K^*$ exchange in the photoproduction data ($\gamma p \rightarrow K^+\Lambda(1520)$). In the case of the $\Sigma(1385)(J^P = \frac{3}{2}^+)$, there has been no such study in the literature, probably due to the lack of available data. The recent large statistics ($L = 75pb^{-1}$) photon-proton reaction data collected by the CLAS Collaboration at Jefferson Lab has made possible the detailed study of the $\Sigma(1385)$ photoproduction through the reaction $\gamma p \rightarrow K^+\Sigma(1385) \rightarrow K^+\Lambda(\pi^0)$. Preliminary cross section results for the photon energy range of 1.5-3.8 GeV, as well as the angular distribution of the $\Sigma(1385)$ decay in the GJ frame will be presented. The results could provide new constraints on the hadro-dynamic models for hyperon production, and help determine the production mechanisms of the $\Sigma(1385)$ in photoproduction.

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