The Search for a $\pi_1(1400)$ Exotic Meson in the $\gamma p \rightarrow \Delta^{++} \eta \pi^-$ System with CLAS

DIANE SCHOTT, FIU, CLAS COLLABORATION — The reaction $\gamma p \rightarrow \Delta^{++} X \rightarrow p\pi^+\pi^-(\eta)$ is being studied, with the CLAS detector in Hall B at Jefferson Lab. The resonance spectrum, $X$, shows contributions from $a_0(980)$ and $a_2(1320)$ in the intermediate states. A PWA of the resonance spectrum has been started and will conclude if there is a $\pi_1(1400)$ present under the $a_2(1320)$ distribution. The presence of the $\Delta^{++}$ restricts the isospin of the possible $X$ states, leaving the PWA with a smaller combination of partial waves, making it ideal to look for the $\pi_1(1400)$. The $\pi_1(1400)$ has been produced with the use of hadron-production previously but has yet to be conclusive with photo-production. The experimental moments have been calculated and the PWA has been started. We will discuss the data trends, along with the PWA technique being implemented.