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Photoproduction of scalar mesons at CLAS[1] SHLOKA CHANDAVAR, KENNETH HICKS, Ohio University, DENNIS WEYGAND, Jefferson Lab, CLAS COLLABORATION — A single gluon, which carries color charge, cannot exist independently outside a hadron. Lattice QCD calculations in pure SU(3), however, predict the existence of glueballs which are bound states of two or more gluons. In the real world, the challenge to identify glueballs experimentally is the fact they mix with meson states. The $f_0(1500)$ is one of several candidates for the lightest glueball, with $J^{PC} = 0^{++}$. We investigate the presence of this particle in photoproduction by analyzing the reaction $\gamma p \to f_J p \to K^0_S K^0_S p \to 2(\pi^+\pi^-)p$. This reaction was studied using data from the g12 experiment performed using the CLAS detector at Jefferson Lab. A preliminary partial wave analysis, performed on the $K^0_S K^0_S$ invariant mass spectrum, will be presented. These results update those presented for this reaction channel at previous conferences.

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