

Abstract Submitted  
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**Cross Sections for  $\gamma p \rightarrow p\eta$  and  $\gamma p \rightarrow p\eta'$  using data from CLAS at Jefferson Lab.** MIKE WILLIAMS, Carnegie Mellon University, CLAS COLLABORATION — Studying  $\eta$  and  $\eta'$  photoproduction presents a good opportunity to search for missing  $N^*$  states, since both mesons act as isospin filters. Previous searches for these states in  $\gamma p \rightarrow p\eta'$  have been hindered by limited statistics in the available experimental data. I will present differential cross sections obtained from the CLAS g11a dataset. Measurements have been made in  $\cos\theta_{CM}^{\eta(\eta')}$  bins of width 0.1 for  $\eta$  photoproduction in 64  $\sqrt{s}$  bins over the energy range  $1.68 \text{ GeV} < \sqrt{s} < 2.84 \text{ GeV}$  and for  $\eta'$  photoproduction in 40  $\sqrt{s}$  bins over the energy range  $1.92 \text{ GeV} < \sqrt{s} < 2.84 \text{ GeV}$ . The width of the center-of-mass energy bins is from 10 MeV–50 MeV, depending on  $\sqrt{s}$ . In total, 1082  $\eta$  and 682  $\eta'$  cross section points are reported. These results represent a tremendous increase in the precision of the world's  $\eta'$  photoproduction data and extend the energy coverage by  $\sim 500 \text{ MeV}$  in  $\sqrt{s}$ .

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