

Abstract Submitted
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A Coupled Partial Wave Analysis of $p\eta$ and $p\eta'$ in photoproduction using CLAS¹ ZEBULUN KRAHN, Carnegie Mellon University, CLAS COLLABORATION — In late 2004, a very large photoproduction data set was collected using the CLAS detector at Jefferson Lab. This data set contains several hundred thousand events of the type $\gamma p \rightarrow \eta p$ and $\gamma p \rightarrow \eta' p$. Results of a coupled partial wave analysis, (pwa), of these two data sets will be presented. The pwa analysis uses a covariant tensor formalism with the aim of disentangling resonance structure in the ηp and $\eta' p$ systems. Such a formalism also allows a method to handle t -channel contributions to the cross sections. In addition, the use of a coupled channel approach takes advantage of the fact that given sufficient phase space, all intermediate states that couple to η must also couple to η' . Given both the different acceptances and systematic errors for the two data sets, this provides for a more constrained method of pulling out partial waves from the two data sets.

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