

Abstract Submitted  
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**Partial wave analysis of  $3\pi$  with pion and photon beams** ANDREW JACKURA, Indiana University, MIKHAIL MIKHASENKO, Uni Bonn HISKP, COMPASS, ADAM SZCZEPANIAK, Indiana University, Jefferson Lab, BERNHARD KETZER, Uni Bonn HISKP, COMPASS, JOINT PHYSICS ANALYSIS CENTER COLLABORATION — We present some results on the analysis of  $3\pi$  resonances from peripheral scattering of pions off of nuclear targets. The analysis is motivated by the recent release of the largest data set on diffractively produced three pions by the COMPASS collaboration. The model emphasizes the  $3\pi$  production process and their final state interactions which satisfy  $S$ -matrix principles. We apply our model to fit partial wave intensities and relative phases from COMPASS in the  $J^{PC} = 2^{-+}$  sector and search for resonances. We then discuss the extension of our formalism to photon beams to be used in the GlueX experiment.

Andrew Jackura  
Indiana University

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