## $\rho^0$ Photoproduction off Protons in CLAS

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## Abstract

Photoproduction of vector mesons is vital in elucidating various phenomena in nuclear physics. Studies of the lightest vector meson,  $\rho^0$ , remain challenging due to its broad width of nearly 150 MeV and competition with the production of  $\Delta$  baryons. Consequently, cross-section data for  $\rho^0$  production are scarce, despite their importance to models such as Constituent Counting Rules and Regge Theory. This presentation briefly describes an ongoing analysis in which the differential cross-section for  $\rho^0$ photoproduction off protons is extracted over a broader range of Mandelstam variables *s* and *t* than previously measured. The data were collected at Jefferson lab in 2008 using the CLAS detector. The experiment used a circularly polarized photon beam with energies ranging between 1.15 and 5.45 GeV incident on a liquid hydrogen target.

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