

Abstract Submitted
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Measurement of the Compton scattering cross section during PrimEx Experiment at Jefferson Lab PAWEL AMBROZEWICZ, North Carolina A&T State University, PRIMEX COLLABORATION — A precision experiment to extract the neutral π^0 lifetime was performed in Hall B of Jefferson Lab in the Fall of 2004. The experiment used Primakoff effect, small angle coherent photoproduction of π^0 's in the Coulomb field of various nuclei, to determine the radiative decay width of the π^0 . This measurement constitutes one of the most precise tools in investigating fundamental symmetry predictions of low energy QCD. The projected experimental accuracy of this lifetime determination is 1.5%, it therefore requires thorough understanding of the underlying systematic uncertainties. To facilitate that Compton scattering data were taken along with the photoproduction data. This allowed to measure the Compton scattering cross section with high precision in a few GeV region. The results of this analysis will be presented.

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