

Abstract Submitted
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Inelastic Compton Scattering on the Deuteron¹ JUNJIE LIAO,
George Washington Univ — Nucleon structure is a challenging and unsolved problem in Quantum Chromodynamics (QCD). Detailed information of it can be parameterized by Compton scattering in terms of two parameters: the electric (α) and magnetic (β) dipole polarizabilities. EFT, a low energy approximation of QCD, has been successfully applied in analysis of elastic Compton scattering off protons and deuterons, and to determine α and β to a desired degree of accuracy. It is a reliable method to handle these channels as well as a wide variety of hadronic interactions, since it provides a consistent model-independent framework with controlled uncertainties. This work aims to extend the application of EFT to describe inelastic Compton scattering on the deuteron, and extract nucleon scalar polarizabilities α and β for purpose of interpretation of data gathered by the High Intensity Gamma Source (HIS).

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