A few changes in the text.

Elastic Compton Scattering from 3He[1] ARMAN MARGARYAN, L/EFT Theory Group, Duke University, HARALD W. GRIESSHAMMER, The George Washington University, DANIEL R. PHILLIPS, Department of Physics and Astronomy and Institute of Nuclear and Particle Physics, BRUNO STRANDBERG, School of Physics and Astronomy, University of Glasgow, JUDITH A. MCGOVERN, School of Physics and Astronomy, The University of Manchester, DEEPSHIKHA SHUKLA, Department of Physics, Rockford University — We study elastic Compton scattering on ^{3}He using chiral effective field theory (χEFT) at photon energies from 60 MeV to approximately 120 MeV. Experiments to measure this process have been proposed for both MAMI at Mainz and the HIγS facility at TUNL. I will present the revised results of a full calculation at third order in the expansion ($\mathcal{O}(\mathcal{Q}^3)$). The amplitude involves a sum of both one- and two-nucleon Compton-scattering mechanisms. We have recently computed the fourth-order two-nucleon diagrams. The numerical impact they have on the cross-section results will be discussed. I will also present results in which amplitudes used so far are augmented by the leading effects from $\Delta(1232)$ degrees of freedom, a step which has already been performed for the proton and deuteron processes. Both cross sections and doubly-polarized asymmetries will be presented, and the sensitivity of these observables to the values of neutron scalar and spin polarizabilities will be assessed.

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