Abstract Submitted
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Hard Exclusive Processes on ^{4}He[1] SIMONETTA LIUTI, University of Virginia — We investigate both Deeply Virtual Compton Scattering (DVCS) and π^o production off nuclear targets in the coherent and incoherent channels. The spin zero of the 4He target allows on one side a simpler description of its partonic structure characterized at leading twist by two Generalized Parton Distirbutions (GPDs), a chirally-even one, H^A and a chirally-odd one, H_T^A. The two GPDs can be studied separately in the DVCS and π^o production processes, respectively. Theoretical results using a microscopic approach to nuclear dynamics will be presented on the interpretation of GPDs in nuclei [1.2], as a means to unravel the transverse structure of nuclei in terms of both spatial and momentum degrees of freedom. Calculations of both asymmetries and cross sections for both the Bethe-Heitler and DVCS processes relevant for upcoming measurements at Jefferson Lab [3] will also be discussed. [1] S. Liuti and S.K. Taneja, Phys.Rev. C **72** :034902,2005. [2] S. Liuti and S.K. Taneja, Phys. Rev. C **72**, 032201 (2005) [3] H. Egyian, F.-X. Girod, K. Hafidi, S. Liuti, E. Voutier et al., JLab Experiment E08-024 (2008).

[1]DE-FG02-01ER41200

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