

Abstract Submitted  
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**Induced Polarization in  ${}^4\text{He}(e, e'\vec{p}){}^3\text{H}$** <sup>1</sup> STEFFEN STRAUCH, University of South Carolina, JEFFERSON LAB HALL A COLLABORATION — Polarization transfer in the  ${}^4\text{He}(\vec{e}, e'\vec{p}){}^3\text{H}$  reaction up to  $Q^2 = 2.6$  (GeV/c)<sup>2</sup> has been measured in an attempt to study possible medium modifications of the proton form factors. Indeed, the measured ratio of polarization-transfer coefficients are described by the inclusion of a medium modification of the proton form factors. This interpretation is challenged by a recent calculation including, particularly, a spin-dependent charge exchange in the final-state interaction. The induced polarization in this reaction is a measure of final-state interactions. Precise data on these are key to shed more light on this controversy. In our recent follow-up experiment E03-104 at Jefferson Lab data were taken at a  $Q^2$  of 0.8 (GeV/c)<sup>2</sup> and 1.3 (GeV/c)<sup>2</sup> on  ${}^1\text{H}$  and  ${}^4\text{He}$  targets. The extraction of the small induced polarization of the recoiling proton for the  ${}^4\text{He}(e, e'\vec{p})$  reaction is complicated by the possible presence of instrumental asymmetries in the focal-plane polarimeter. The induced polarization in the elastic  ${}^1\text{H}(e, e'\vec{p})$  reaction is (in one-photon approximation) zero and provides crucial information about these false asymmetries. Our extraction procedure and preliminary results will be presented.

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