

Abstract Submitted  
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**A precise extraction of the proton recoil polarization in  ${}^4\text{He}(\vec{e}, e'\vec{p}){}^3\text{H}$**  SIMONA MALACE, MICHAEL PAOLONE, STEFFEN STRAUCH, University of South Carolina, JEFFERSON LAB HALL A COLLABORATION — I will present final results from the experiment E03-104 at Jefferson Lab where the proton recoil polarization in the  ${}^4\text{He}(\vec{e}, e'\vec{p}){}^3\text{H}$  reaction was measured with unprecedented precision at  $Q^2$  values of  $0.8 (\text{GeV}/c)^2$  and  $1.3 (\text{GeV}/c)^2$ . We extracted both the polarization-transfer coefficients and the induced polarization. The precise extraction of the latter was only possible after extensive work to minimize false asymmetries, and provides a measure of final-state interactions. The measured ratio of polarization-transfer coefficients differs from a fully relativistic calculation by Udias *et al.*. The inclusion of a medium modification of the proton form factors predicted by a quark-meson coupling model or a chiral quark-soliton model brings the calculation in agreement with the data. Our data are equally well described by the prediction of Schiavilla *et al.* which instead uses free proton form factors but incorporates meson-exchange current effects and strong charge-exchange final state interactions. Neither theoretical calculation offers a satisfactory description of our induced polarization results.

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