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A precise extraction of the proton induced polarization in ^{4}He$(e,e'\vec{p})^3$H SIMONA MALACE, MICHAEL PAOLONE, STEFFEN STRAUCH, University of South Carolina, JEFFERSON LAB E03-104 COLLABORATION — I will present final results on the extraction of the induced polarization P_y in $^4\mathrm{He}(e,e'\vec{p})^3\mathrm{H}$ from experiment E03-104 at Jefferson Lab at Q^2 values of 0.8 $(\mathrm{GeV}/c)^2$ and 1.3 $(\mathrm{GeV}/c)^2$. False asymmetries complicate the extraction of P_y. Our experiment was uniquely set up to offer the same coverage in the proton acceptance in $\mathrm{H}(e,e'\vec{p})$ as in $^4\mathrm{He}(e,e'\vec{p})^3\mathrm{H}$ and allow for a significant cancellation of false asymmetries in the difference. An extensive work was carried out to minimize false asymmetries. As a result we were able to reduce the experimental uncertainties in the difference of P_y (ΔP_y) extracted from $^4\mathrm{He}(e,e'\vec{p})^3\mathrm{H}$ and $\mathrm{H}(e,e'\vec{p})$ by a factor of 3 compared to previous results. The greatly reduced experimental uncertainties result in an increased possible sensitivity of ΔP_y to higher order physics effects that yield a nonzero value for P_y in $\mathrm{H}(e,e'\vec{p})$ such as two-photon-exchange effects. We compare our results with two recent calculations for P_y, those of Udias *et al.* and Schiavilla *et al.*, which use different approaches to model final state interactions.

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