

DNP13-2013-020262

Abstract for an Invited Paper  
for the DNP13 Meeting of  
the American Physical Society

**Dissertation Award Winner: First Determination of the Proton's Weak Charge from the Qweak Experiment**

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The Qweak experiment at the Thomas Jefferson National Accelerator Facility has measured the parity-violating asymmetry in elastic electron-proton scattering at low momentum transfer,  $Q^2 = 0.025 \text{ GeV}^2$ . This asymmetry is proportional to the weak charge of the proton and can be related to the electroweak mixing angle of the Standard Model. The experiment will ultimately provide the most precise measurement of the weak mixing angle at low energy to date, challenging the predictions of the Standard Model and probing certain types of new physics up to the TeV scale. Details of how this challenging measurement was performed and the first results from the measurement with the extracted weak charge of the proton will be presented.

<sup>1</sup>On behalf of the Qweak Collaboration