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# Qweak: First Direct Measurement of the Proton's Weak Charge

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The Qweak experiment, which ran for two and a half years at Jefferson Lab, will precisely determine the weak charge of the proton by measuring the parity-violating asymmetry in elastic e-p scattering at 1.1 GeV using a longitudinally polarized electron beam and a liquid hydrogen target at a low momentum transfer of  $Q^2 = 0.025 \text{ (GeV/c)}^2$ . The weak charge of the proton is predicted by the Standard Model and any significant deviation would indicate physics beyond the Standard Model. The technical challenges and experimental apparatus for measuring the weak charge of the proton will be discussed, as well as the method of extracting the weak charge of the proton. The results from a small subset of the data, that has been published, will also be presented. Furthermore an update will be given of the current status of the data analysis and of several of ancillary experiments performed.

## Summary

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**Session Classification:** Section E

**Track Classification:** Section E: QCD and New Physics