

Measurement of the Weak Charge of the Proton by the Qweak Collaboration

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The measurement of the violation of parity symmetry in electron scattering is a powerful technique in the search for new fundamental forces. The Qweak collaboration has recently completed a highly precise measurement of parity violation in the elastic scattering of longitudinally polarized electrons from unpolarized protons. From this result, the weak charge of the proton is determined and compared to the Standard Model prediction, providing a constraint on the possible influence of new physics. The result will be presented, and the techniques and implications of this measurement will be discussed. Prospects for future improvements will also be briefly reviewed.

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