

A new measurement of the weak charge of the proton

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After a series of parity violation electron scattering experiments in order to explore the strangeness content of the nucleon, we plan on a new, improved parity violation experiment where we will measure the weak charge of the proton with a relative accuracy of 1.7%. This accuracy results in a measurement of the effective electroweak mixing angle $\sin^2 \theta_W$ of 1.5 per mille, in accuracy comparable to the present accuracy stemming from measurements at the Z-pole. It can test new physics beyond the standard model up to a scale $\Lambda = 6,4$ TeV. The measurement will be performed a low beam energy of 137 MeV up to 200 MeV with an Q^2 of 0.022 up to 0.049 (GeV/c)². The expected accuracy will be discussed and the experimental strategy will be presented.

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