

Abstract Submitted
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The Q_{weak} Experiment: Measurement of the Elastic Parity-Violating e-p Asymmetry at Low Q^2 ADESH SUBEDI, Mississippi State University, QWEAK COLLABORATION — Q-weak part 1. The Q_{weak} experiment at Jefferson laboratory has measured the parity-violating asymmetry in e-p elastic scattering at $Q^2 = 0.025 \text{ (GeV/c)}^2$, employing longitudinally polarized electrons incident on a 34.5 cm long liquid hydrogen target. The measurement was performed using an integrating mode apparatus with a set of eight quartz Cerenkov detectors placed radially along the beam axis. The resulting measured asymmetry is then corrected for various effects, including false asymmetries generated by helicity-correlated beam properties, backgrounds from aluminum target windows and the beamline, and the beam polarization. The results of the experiment's commissioning run will be reported, which consist of approximately $1/25^{\text{th}}$ of the total data collected during the full measurement. This talk will focus on the Q_{weak} apparatus and the analysis to determine the asymmetry. A value of the physics asymmetry from the experiment's commissioning run will be presented.

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