

Abstract Submitted
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Qweak Particle Tracking System¹ RAKITHA BEMINIWATTHA,
Ohio University, QWEAK COLLABORATION — Q_{Weak} experiment at Jefferson lab will measure parity-violating elastic electron-proton scattering asymmetry at $Q^2 \simeq 0.03 GeV/c^2$ to obtain the weak charge of the Proton, Q_W to an accuracy of 4%. An accurate value of Q^2 is required to measure the Q_W . A low beam-current counting- mode particle tracking system will measure the average Q^2 to an accuracy of 0.5%. A dedicated tracking software system will decode tracking detector signals to generate a set of electron hit data that will be used to derive individual electron tracks. This will enable us to calculate the scattering angle and interaction vertex, map the main detector response function, and correct the main detector signal for background contributions. A summary of the Q_{Weak} tracking detectors and software system will be presented.

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