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**Simulation and Measurement of the Qweak Main Detector Energy Sensitivity** ADESH SUBEDI, Mississippi State University — The Qweak experiment in Hall C at Jefferson lab aims to make the first direct measurement of the weak charge of the proton with about 4% overall uncertainty by measuring the parity violating asymmetry in elastic electron-proton scattering. Changes in helicity correlated beam properties create false asymmetries, particularly if the apparatus is misaligned. We measure and correct such false asymmetries, but also try to understand and reduce them where possible. This talk will emphasize simulations of the sensitivity of the main detector to energy jitter (the single largest correction!) and what the comparison to data tells us about our detector alignment.

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