

Abstract Submitted
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Optimization and Expansion of the Qweak Database GRACE TREES, DAMON SPAYDE, Hendrix College — Weak interactions have been found to violate parity conservation and can be observed in electron-proton scattering. The results of the scattering reveal an asymmetry in the scattering-rate of electrons in the detectors as the helicity of the beam is flopped. By measuring this asymmetry, the Qweak experiment can determine weak charge of the proton. That value can then be used to calculate the weak mixing angle. The weak mixing angle can indicate if there is physics beyond the Standard Model. The experiment will be collecting data for approximately 2200 hours at the Thomas Jefferson Lab National Accelerator Facility. A database has been implemented to allow for storage and organization of the collected data so it can be analyzed at a future time. This database must be optimized in order to allow quick and easy access for every member of the collaboration. This optimization can be accomplished through speed tests to weigh different techniques that can be used in the database as well as altering and expanding the database for improved data procurement.

Grace Trees
Hendrix College

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