The 2025 International Workshop on the High Energy Circular Electron Positron Collider

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Two-Loop Electroweak Radiative Corrections to Low-Energy Electron-Electron Scattering

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Parity-violating electron scattering is a powerful tool for precision tests of the Standard Model, enabling highly accurate measurements of the weak mixing angle. The upcoming MOLLER experiment at the Jefferson Lab will measure the electron's weak charge with 0.1% precision, providing sensitivity to new physics at the O(10) TeV scale. This talk will present recent theoretical work aimed at reducing the associated theoretical uncertainties to a level that matches or surpasses this experimental target.

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