\vec{e} -²H Parity Violating Deep Inelastic Scattering at Jefferson Laboratory at 6 GeV

<u>Ramesh Subedi</u>¹, Xiaoyan Deng¹, Diancheng Wang¹, Xiaochao Zheng¹, Robert Michaels², and Paul Reimer³ *for the Hall A collaboration*

University of Virginia, 382 McCormick Rd., Charlottesville, VA 22903
Thomas Jefferson National Accelerator Facility, Newport News, VA 23606

3 Argonne National Laboratory, Argonne, IL 60439

The upcoming PVDIS (parity violating deep inelastic scattering) experiment E08-011 in Hall A at Jefferson Lab aims to measure a combination of the axial hadronic couplings of the electron with a factor of eight improvement in precision over world data. Precise data for the couplings are essential to search for physics beyond the Standard Model. The experiment will measure a 10^{-4} asymmetry using polarized electron scattering from deuterium at 6 GeV. Recent progress on the preparation for this experiment, with an emphasis on the tests of the electronics and the capability for measuring a small asymmetry, separating electrons and pions, the deadtime, and pileup effects, will be presented.