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Precision Measurement of π^0 Electroproduction Cross Section Near Threshold MITRA SHABESTARI, University of Virginia, JEFFERSON LAB PI0 COLLABORATION — Experiment E04-007, a high precision measurement of the reaction $H\left(e,e'p\right)\pi^0$ near threshold, which was performed at Hall A of Jefferson Laboratory. Measurements were made in a fine grid of Q^2, $0.045\left(GeV/c\right)^2 \leq Q^2 \leq 0.15\left(GeV/c\right)^2$, and ΔW range of $0MeV \leq \Delta W \leq 30MeV$. Polarized electron beams at energies of 1194 and 2232 MeV were used to bombard a liquid hydrogen target. The pion was identified by detecting the electron in one of the high-resolution spectrometers in coincidence with the recoiled proton, detected in the large acceptance BigBite spectrometer. These coincidence data allow us to reexamine the aforementioned disagreement and test chiral QCD dynamics. The experimental details will be discussed, and some preliminary results will be presented.

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