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Status of the Measurement of Neutrino-Electron Elastic Scattering in the NOvA Near Detector WENJIE WU, University of California, Irvine, NOVA COLLABORATION — NOvA is a long-baseline accelerator neutrino experiment primarily designed to measure neutrino oscillations. A high purity muon neutrino beam is produced at Fermilab with a central energy of approximately 1.8 GeV. NOvA consists of a near detector located 1 km downstream of the beam target at Fermilab and a far detector located 810 km away in Ash River, Minnesota. The large uncertainty in the absolute neutrino flux affects cross-section measurements in the near detector. Since the cross-section of the neutrino-electron elastic scattering can be accurately calculated, it provides an in situ constraint on the absolute flux. We present the status of the measurement of the neutrino-electron elastic scattering rate using a Convolutional Neural Network (CNN) to identify signal events in an inclusive dataset.

Wenjie Wu
University of California, Irvine

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