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Status of the Electron-Neutrino Charged-Current Inclusive Cross-Section Measurement in NOvA

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The electron-neutrino charged-current inclusive cross section on nuclei is an important input parameter for electron-neutrino appearance oscillation experiments. There are a small number of measurements, with limited statistics, in the few GeV region where current and future long base-line neutrinos experiments operate. The NOvA near detector is located at Fermilab, approximately 800 m from the NuMI beam production target and thus provides an excellent platform to measure and study neutrino interactions and cross sections with high statistics. We present our progress, including the use of a convolutional visual network (CVN) technique as event classifier, on this neutrino scattering measurement in the energy range of 1-3 GeV with data collected from November 2014 to February 2017 in the NOvA near detector.

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