

Abstract Submitted
for the APR18 Meeting of
The American Physical Society

Status of the inclusive electron neutrino charged-current cross-section measurement in the NOvA near detector MATTHEW JUDAH, Colorado State University, LEONIDAS ALIAGA, PENGFEI DING, Fermilab, NOVA COLLABORATION — The inclusive electron neutrino charged-current (CC) cross-section on nuclei is an important input parameter to appearance neutrino oscillation measurements. There are a small number of measurements of this cross-section in the few-GeV region where current and future long baseline neutrino experiments operate. This analysis uses an event identification technique inspired by visual deep learning tools. We present the current status and techniques being used on the NOvA experiment for the inclusive CC measurement in few-GeV electron neutrino interactions. This measurement looks to produce the single differential cross sections versus electron angle and energy, as well as the total cross section versus neutrino energy.

Matthew Judah
Colorado State University

Date submitted: 12 Jan 2018

Electronic form version 1.4