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Charged Pion Production in Electron-Neutrino Charged-Current Interactions in the NOvA Near Detector[1] ANNE CHRISTENSEN, Colorado State University, NOVA COLLABORATION — NOvA is a long-baseline neutrino oscillation experiment. The main physics goals of NOvA are the measurement of neutrino oscillation parameters, determination of the neutrino mass ordering, and observation of CP violation. NuMI, an intense muon neutrino beam, is produced at Fermilab, and neutrino interactions are observed in a near detector (ND) 1 km downstream from the target, and at a far detector, 810 km away. The high statistics dataset collected at the NOvA ND allows for new and novel cross-section measurements of neutrino interactions. The rate of electron-neutrino (ν_e) charged-current (CC) interactions resulting in a charged pion has never been measured before. In this poster, we present the main goals and motivation of the analysis and simulation studies indicating the key reconstruction features in signal events and kinematic distributions of final-state pions and electrons.

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