

Abstract Submitted  
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**ND280 Detector at T2K Experiment** ALEX CLIFTON, Colorado State University, T2K COLLABORATION — The T2K experiment will study neutrino oscillations as they travel 295 km from the Japan Proton Accelerator Research Complex (JPARC) in Tokai, Japan, to the Super Kamiokande detector in the Kamioka Mine in Japan. The JPARC accelerator creates a neutrino beam that is monitored by “NearDetector” (ND280) that is 280m downstream of the neutrino target where the neutrinos are created. The ND280 detector is measuring the neutrino beam characteristics including its energy spectrum, lepton flavor content, and interaction rates of the unoscillated beam. ND280 is a magnetized detector which houses several sub-detector components. A pi zero detector (P0D) is located in the upstream end of ND280. Inside the P0D are tracking planes of scintillator bars which alternate with lead foil. Downstream from the P0D are three time projection chambers (TPC) and two fine grain detectors (FGD) made of alternating layers of scintillating bars. These are optimized to measure any charged current interactions of the neutrino beam. All of these detectors are housed by an electromagnetic calorimeter (ECAL) which is used to detect gamma rays that do not convert inside the detectors.

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