

Abstract Submitted
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The Deep Underground Neutrino Experiment Design and Associated Quality Control Procedure HARSHWARDHAN PRASAD, University of Texas at Arlington — The Deep Underground Neutrino Experiment aims to explain the phenomenon's unexplained by the Standard Model. DUNE consists of a Far Detector situated approximately a kilometer beneath the Sanford Underground Research Facility (SURF) in South Dakota and a Near Detector situated at Fermilab. The design of the DUNE consists of a Liquid Argon Time Projection Chamber (LArTPC), the purpose of which is to detect neutrino interactions and reconstruct particle tracks. The Far Detectors consist of a field cage, high voltage system, photon detection system, and more. The field cage, made up of fiber reinforced plastic (FRP) I-beams, provides the structure for the detector and houses the necessary electrical components that creates the electric field. The successful operation of the field cage depends on the components used due to the sensitivity of the experiment, and hence it is important to have high standard for passing the parts. The UTA HEP team has devised a quality assurance and quality control procedure to process the I-Beams and similar FRP components to be used in the construction of modules that are integral to the detection of neutrinos.

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