Abstract Submitted
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Light Injection tests in P0D neutrino detector TIMOTHY WALTON, Colorado State University — The T2K experiment will measure neutrino mixing by sending a neutrino beam, created at the Japan Proton Accelerator Research Center (JPARC) in Tokai, Japan, over 290 km underground to the Super-Kamiokande detector. The neutrino beam at JPARC will be monitored by ND280 experiment which contains the Pizero Detector (P0D). The P0D contains around 11,000 scintillator bars, each with a wavelength shifting fiber connected to an avalanche photo diode sensor. These sensors, called MPPCs, are monitored by an LED light injection system developed at Colorado State University. We show the initial results of a study of the response of the MPPC sensors to the LED light pulses. We find unexpectedly large signal variation in some groups of MPPCs, and we determine the cause to be slight random height variations in the fibers themselves.

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