Quality Assurance Test Setup for MPPCs used by the P0D in the T2K Experiment

DANIEL RUTERBORIES, BRUCE BERGER, NORM BUCHANAN, BEN GOOKIN, DAVID WARNER, ROBERT WILSON, Colorado State University, T2K COLLABORATION — The PiZero sub-detector (P0D) of the T2K off-axis near detector will utilize novel silicon-based photo-sensors, multi-pixel photon counters (MPPCs), from Hamamatsu for readout of all of its 10,400 channels. Prior to use in the P0D each MPPC must be examined as part of a rigorous quality assurance program. This presentation will describe the MPPC quality assurance procedure undertaken at Colorado State University. An overview of the operation of the MPPCs under various bias voltages is given. In addition, the performance of the detectors with various light intensities is presented.

Bruce Berger
Colorado State University

Date submitted: 18 Sep 2008