

Information for DOE Report

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This document summarizes the work I have done in the past year for the DOE report, starting with DUNE and followed by NO ν A.

1. DUNE

1.1. Comparison of Photon Detector Designs at CDDF

We compared the performance of the photon detector designs from CSU and LSU. Detectors were put side by side in the Dewar at CDDF. Each detector has 2 SiPM channels. Figure 1 shows the integrated ADC for the four SiPM channels. A threshold scan was done to set the threshold just above the pedestal peak.

Figure 2 shows calibrated photoelectron(PE) spectra for the four channels. The calibration was done by assigning the first peak to 1 PE, the second to 2 PE, etc.

2. NO ν A

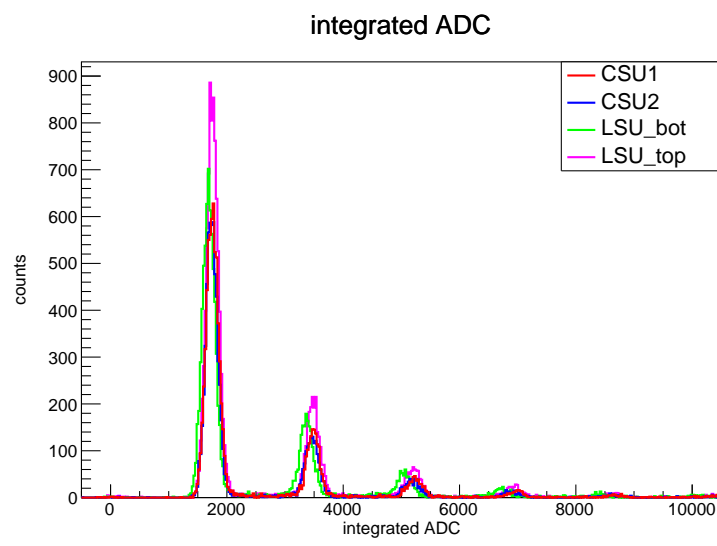


Figure 1. Integrated ADC for the four SiPM channels.

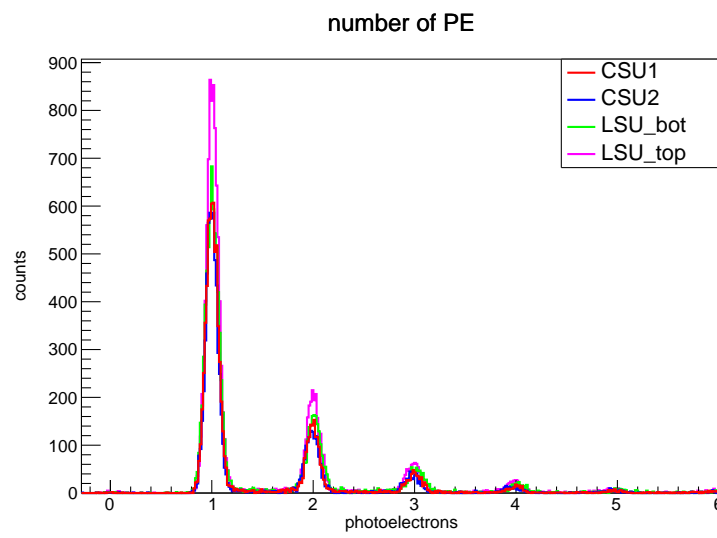


Figure 2. ADC to photoelectron calibration for the four SiPM channels.