SBND PMG Report

February 6 2025

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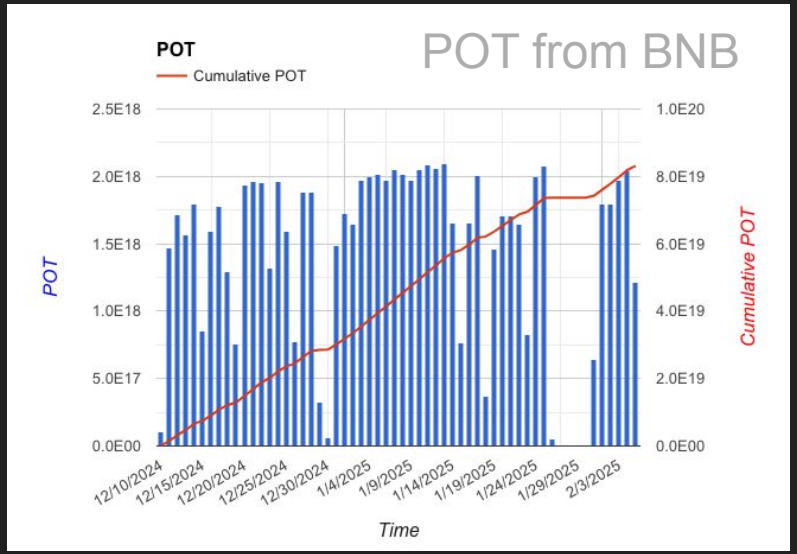
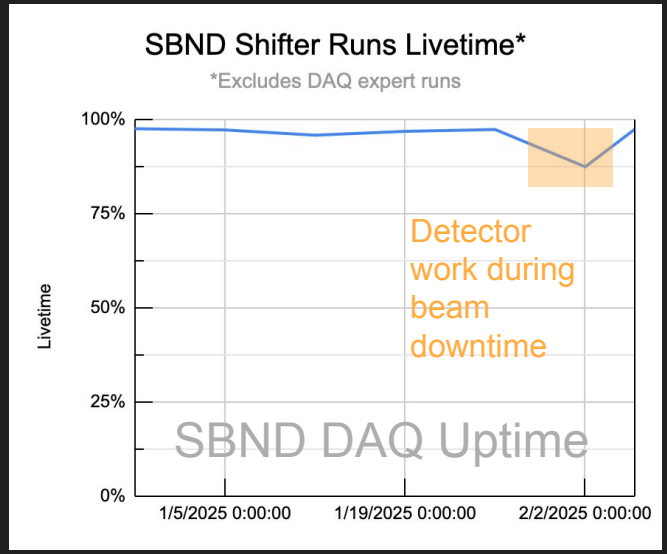
SBND is Collecting BNB Data

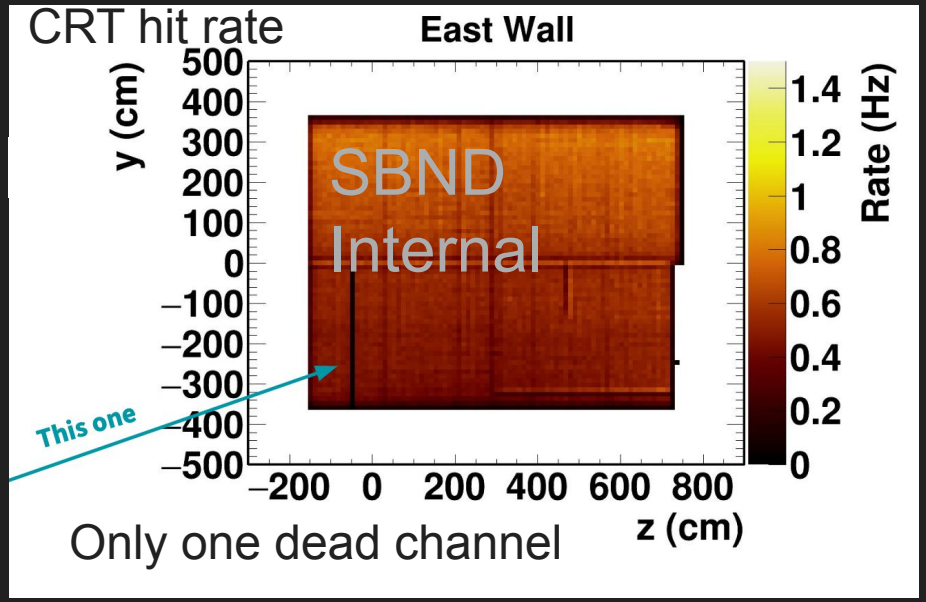
- We've received ~8e19 POT since the start of BNB running this year
- We've operated the SBND DAQ with a ~97% uptime during that period

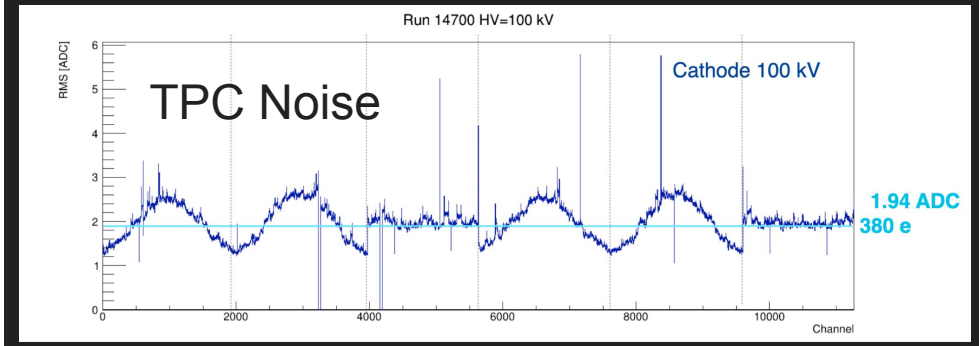




Status of Detector

- The core SBND subsystems (TPC, PMTs, CRT) are in a stable configuration for collecting beam data





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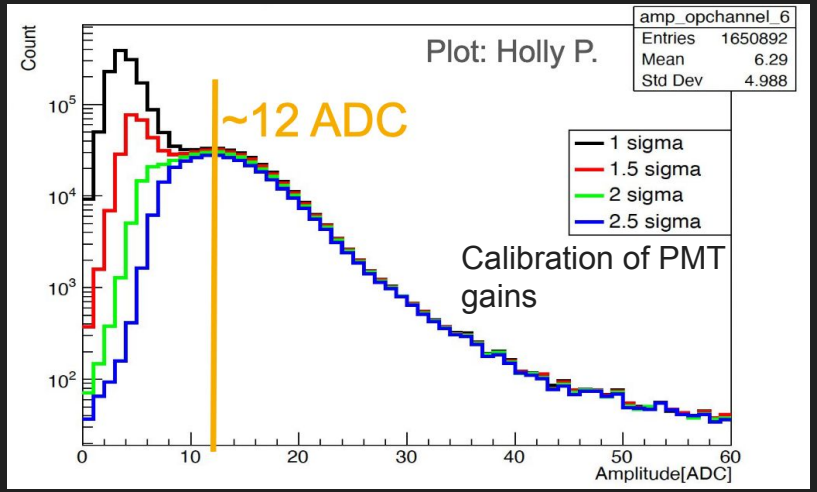

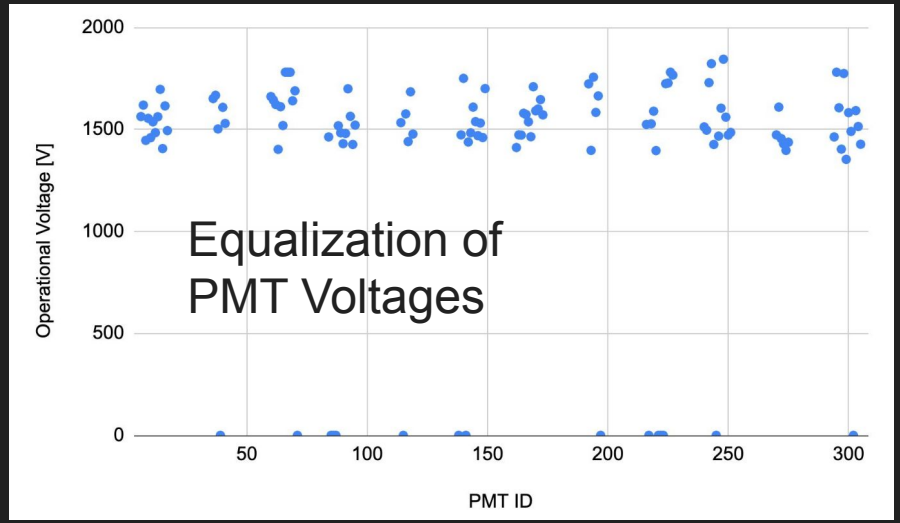

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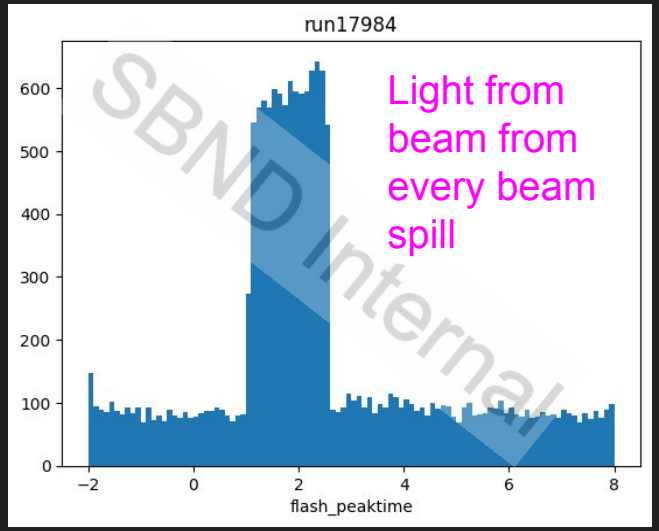
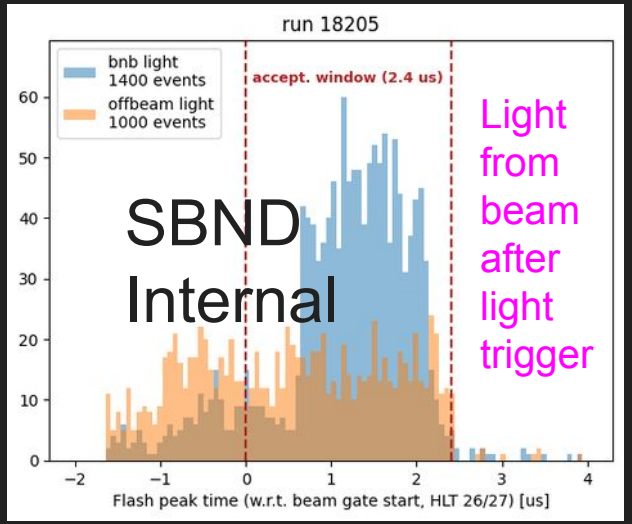
- There is some planned work on the X-Arapuca photon detection system
  - This work is proceeding when we get beam downtimes

Trigger Development

- Thus far, we have been triggering on every beam spill sent by BNB
- We are close to enabling a light-based trigger
  - This will enable a big reduction in our data volume





Run Plan for Next Month

- We are currently running in a **3-trigger configuration**
  - On-beam zero-bias (every spill) (~5 Hz), Off-beam zero-bias (~2 Hz), Calibration trigger (~1 Hz)

- Our goal is to move to a **5-trigger configuration**
  - On-beam triggered (~0.5 Hz), On-beam prescaled zero-bias (~0.25 Hz), Off-beam triggered (~0.2 Hz), Off-beam zero-bias (~2 Hz), Calibration trigger (~1 Hz)

- We would run in this configuration until the summer beam shutdown