



## ANNIE: Accelerator Neutrino Neutron Interaction Experiment

Cathal Sweeney and Carrie McGivern  
on behalf of the ANNIE collaboration

PMG experiments meeting

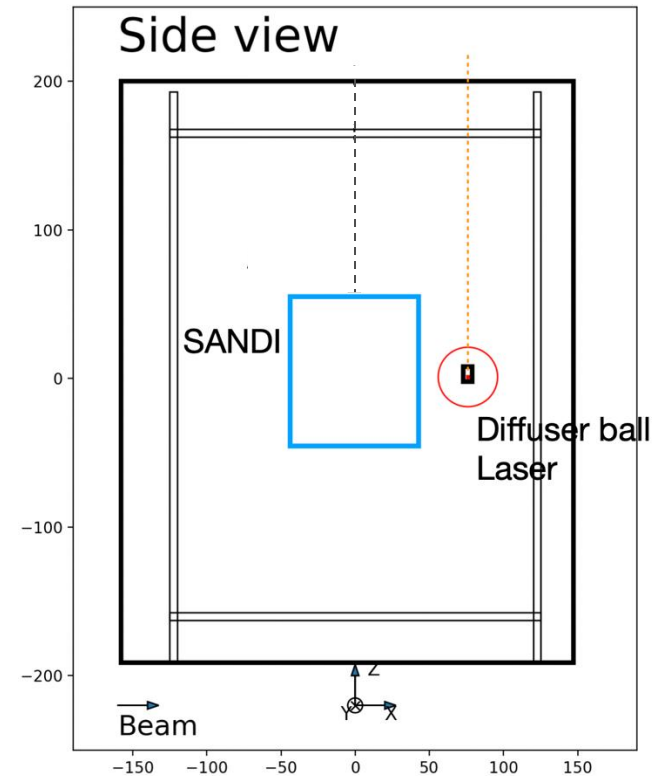
6<sup>th</sup> February 2025

IOWA STATE  
UNIVERSITY



# SANDI v2

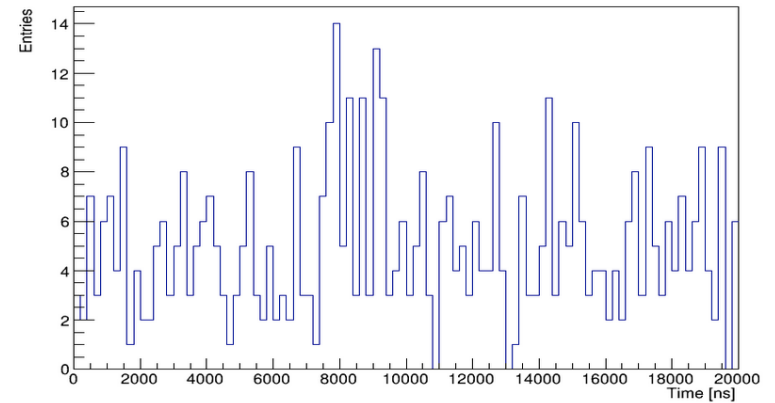
- SANDI vessel v2 (WbLS + Gd) being removed currently
  - WbLS → Cherenkov + scintillation light
  - ~7 weeks of beam data



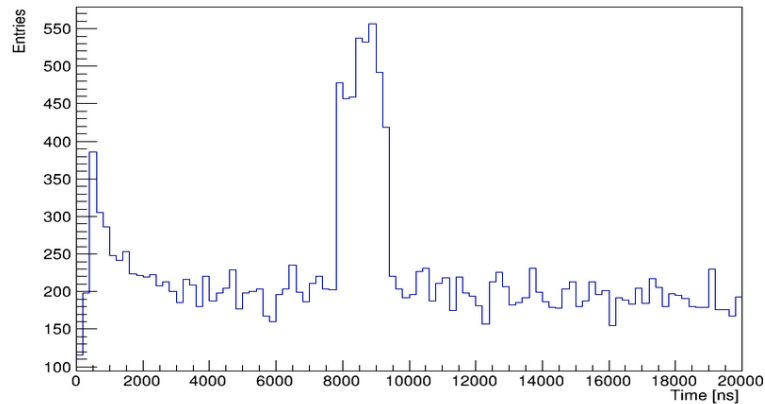
# LAPPDs

- 3 LAPPDs saw neutrino data in WbLS+Gd
- Two LAPPDs were removed to resolve some issues
- A further 2 LAPPDs are in the lab
  - Prepping for future deployment

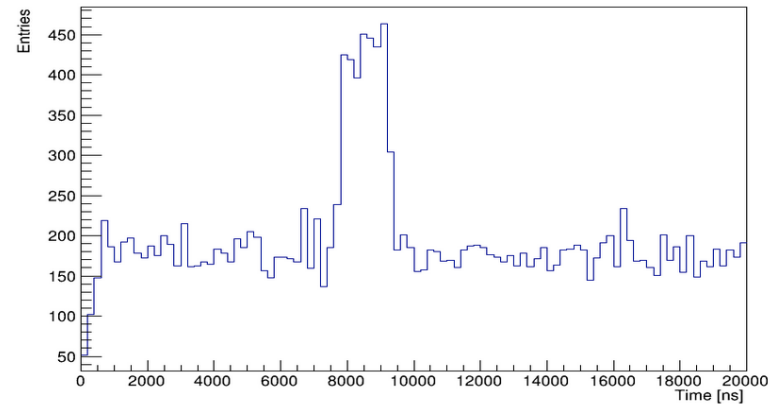
Alignment Thousand Files Board 0 (2024/12/12-15:21:16)



Alignment Thousand Files Board 2 (2024/12/12-15:22:56)



Alignment Thousand Files Board 4 (2024/12/12-15:23:17)



# LAPPD issues

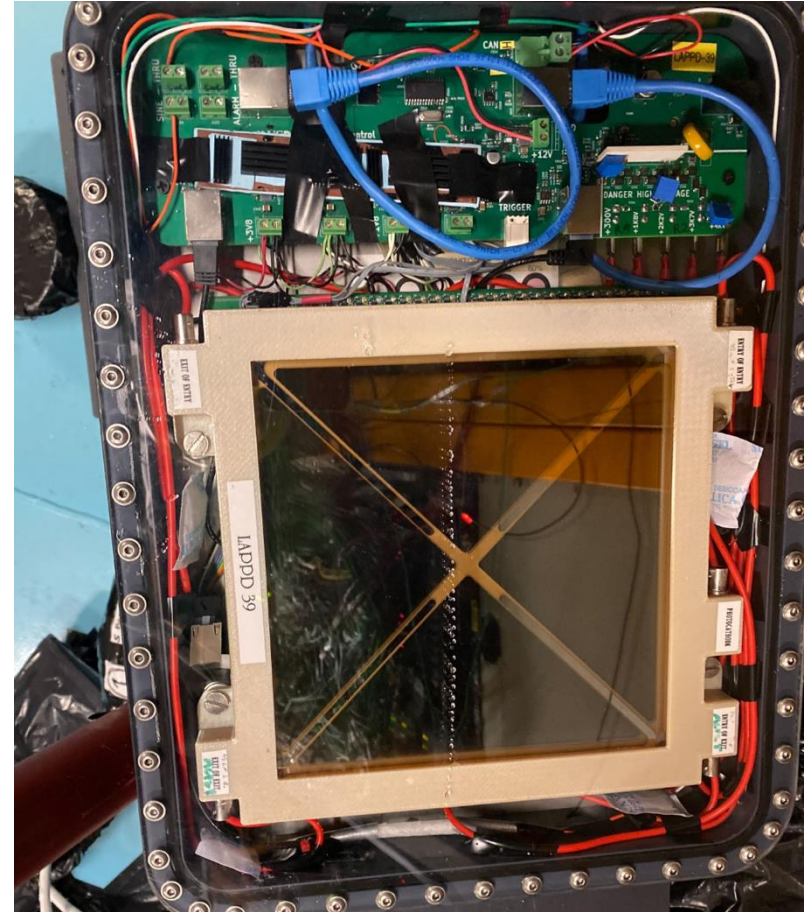
- Slightly unplugged waterproof connector
  - Poor communication
  - Rusted pin





# LAPPD issues

- Small water leak into housing
  - Inadequate sealing at housing connector
  - Leak detection caught this very quickly



# Muon range detector (MRD)

- Intermittent problems with CAMAC power supply used for MRD TDCs
  - Should supply 6V, but sometimes drops to ~4.5V
  - MRD data is not recorded
  - Easily fixable by power cycling crate
- Occurred a few times at start of beam year
- Has not occurred in several weeks – running stably

# Summary

- Multi-LAPPD beam data with SANDI v2
- All systems taking data
- ANNIE now has 5 LAPPDs, with one currently in the water