



# ANNIE: Accelerator Neutrino Neutron Interaction Experiment

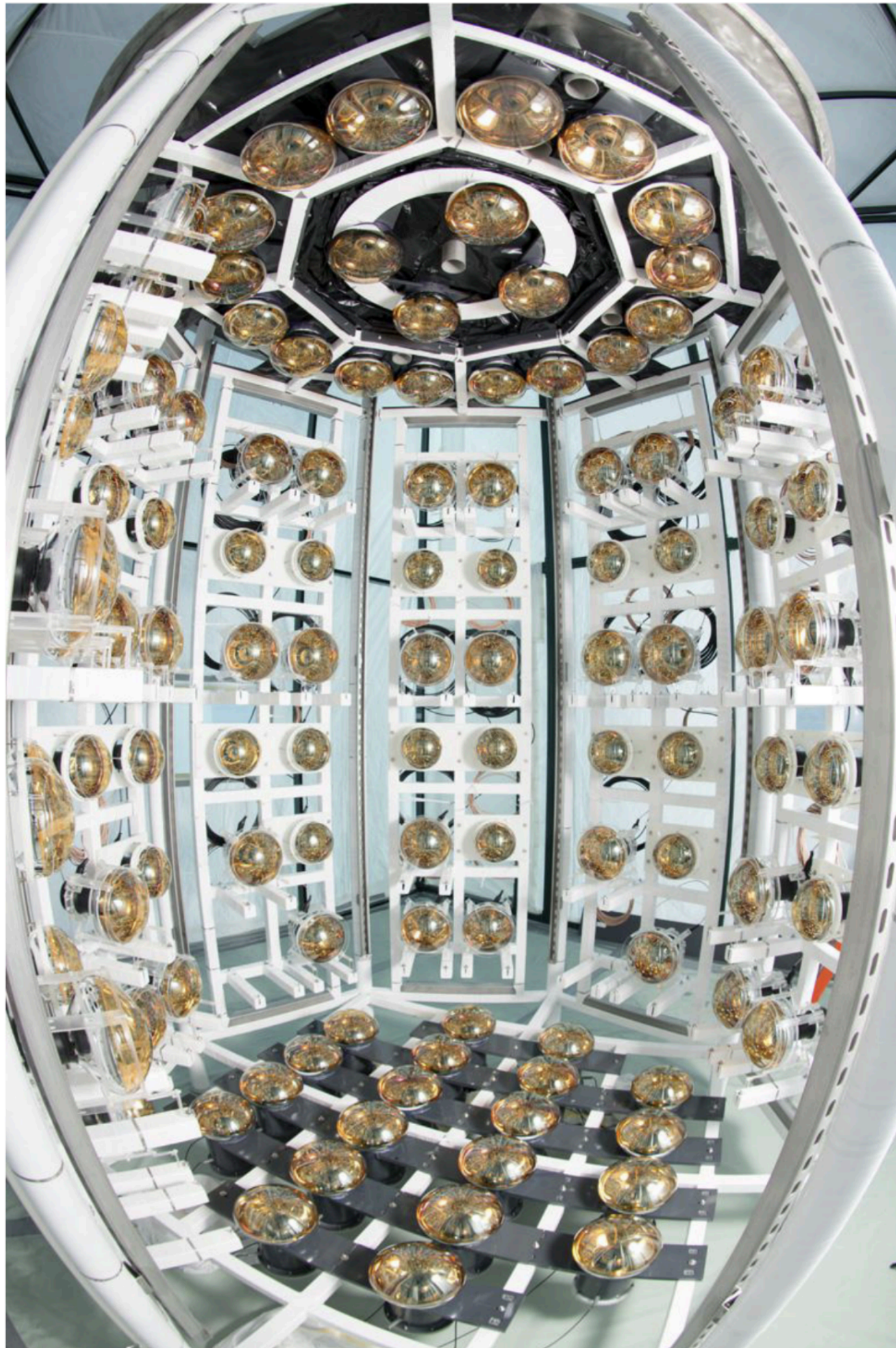
Marvin Ascencio

on behalf of the ANNIE collaboration

PMG experiments meeting, November 3th, 2022

**IOWA STATE  
UNIVERSITY**

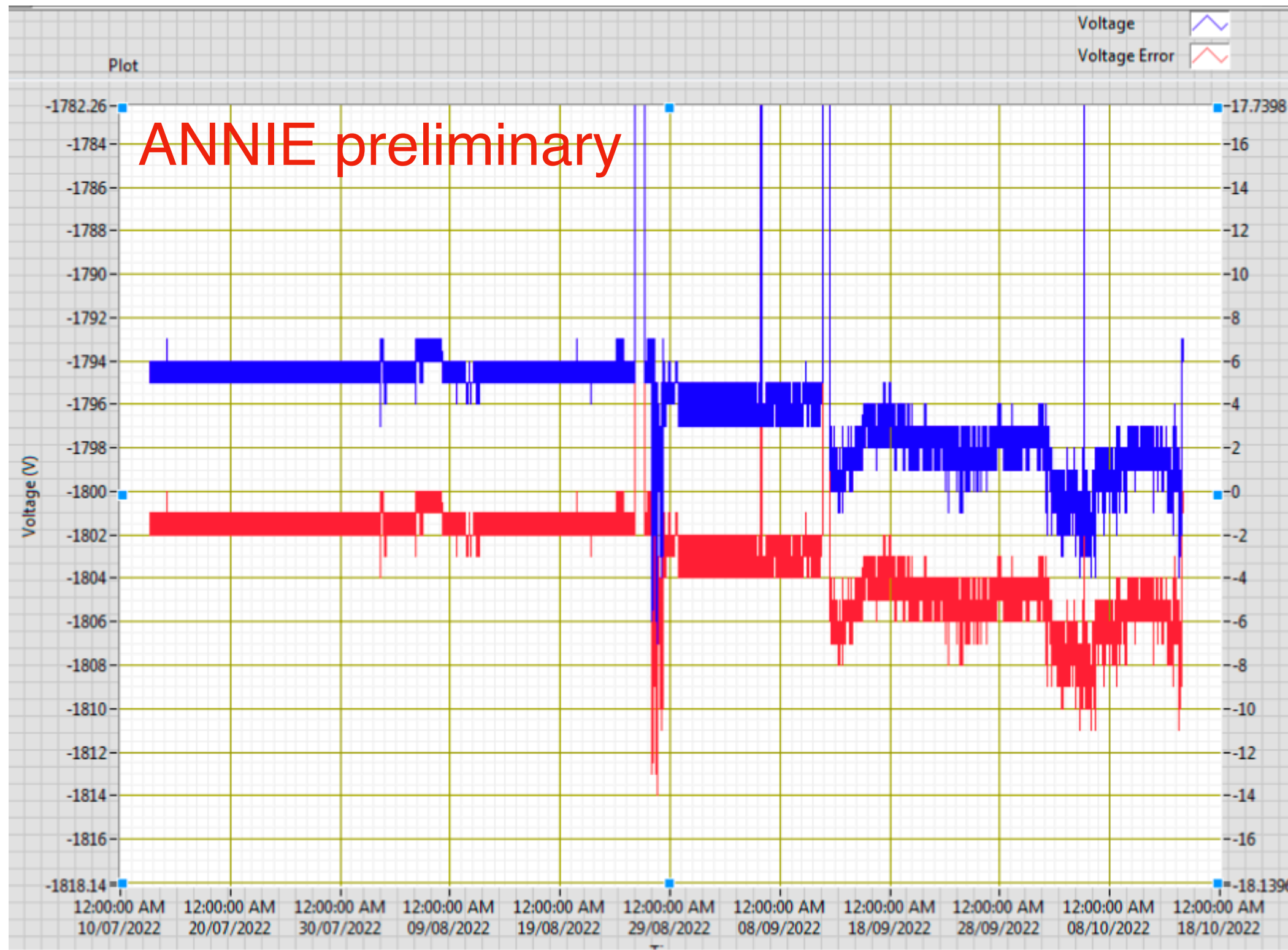




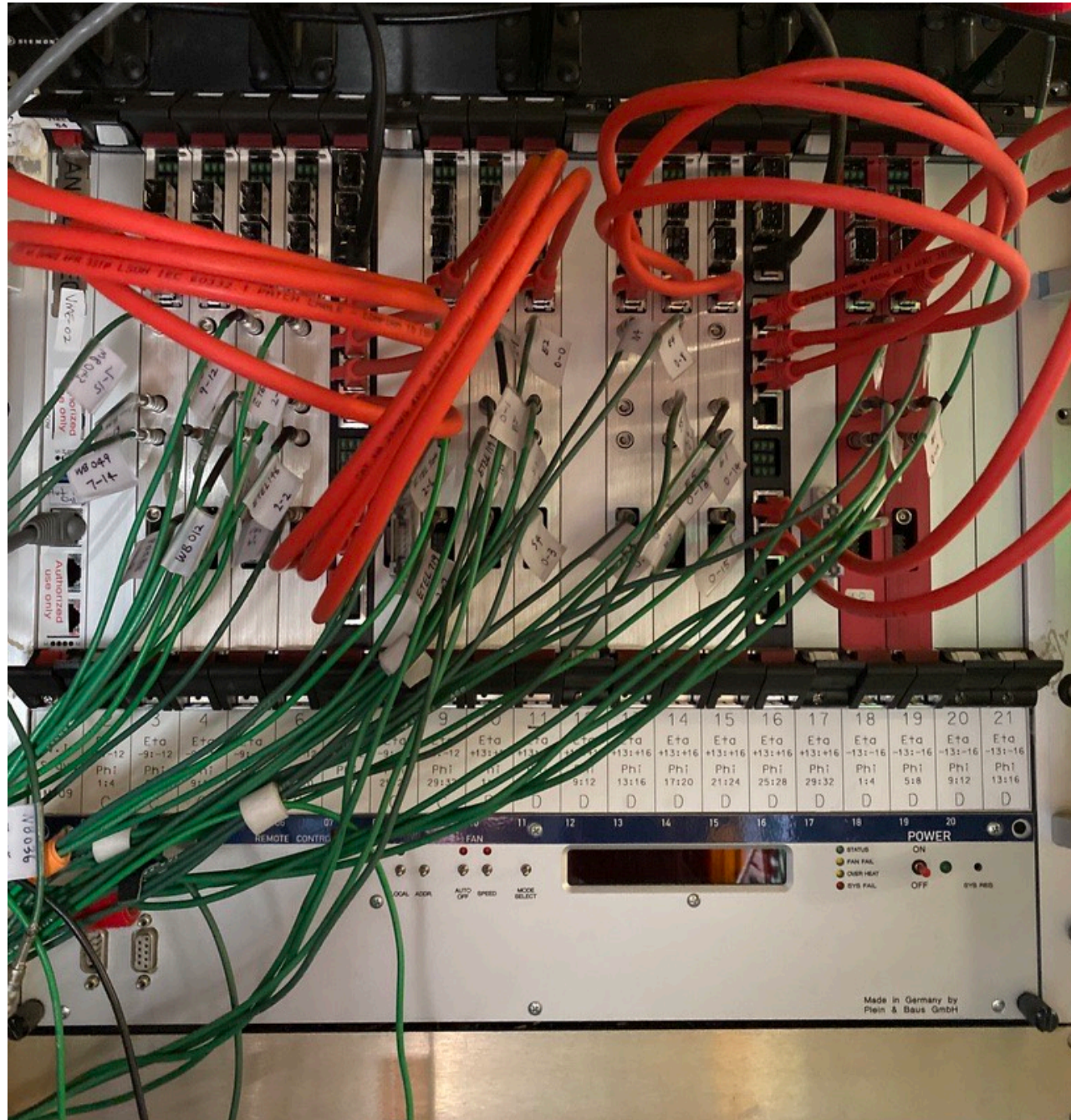
- ▶ Rack #5: PDU, VME 01 crate, and the 2 ADC cards are operative.
- ▶ The mock LAPPD deployment has been performed. Testing the structure, which will hold two LAPPD's housings.
- ▶ The SANDI vessel and the WbLS containers are already in Lab6.
- ▶ The resin and the filter have been changed.

\*Scintillator for ANNIE Neutrino Detection Improvement

\*Water-based Liquid Scintillator

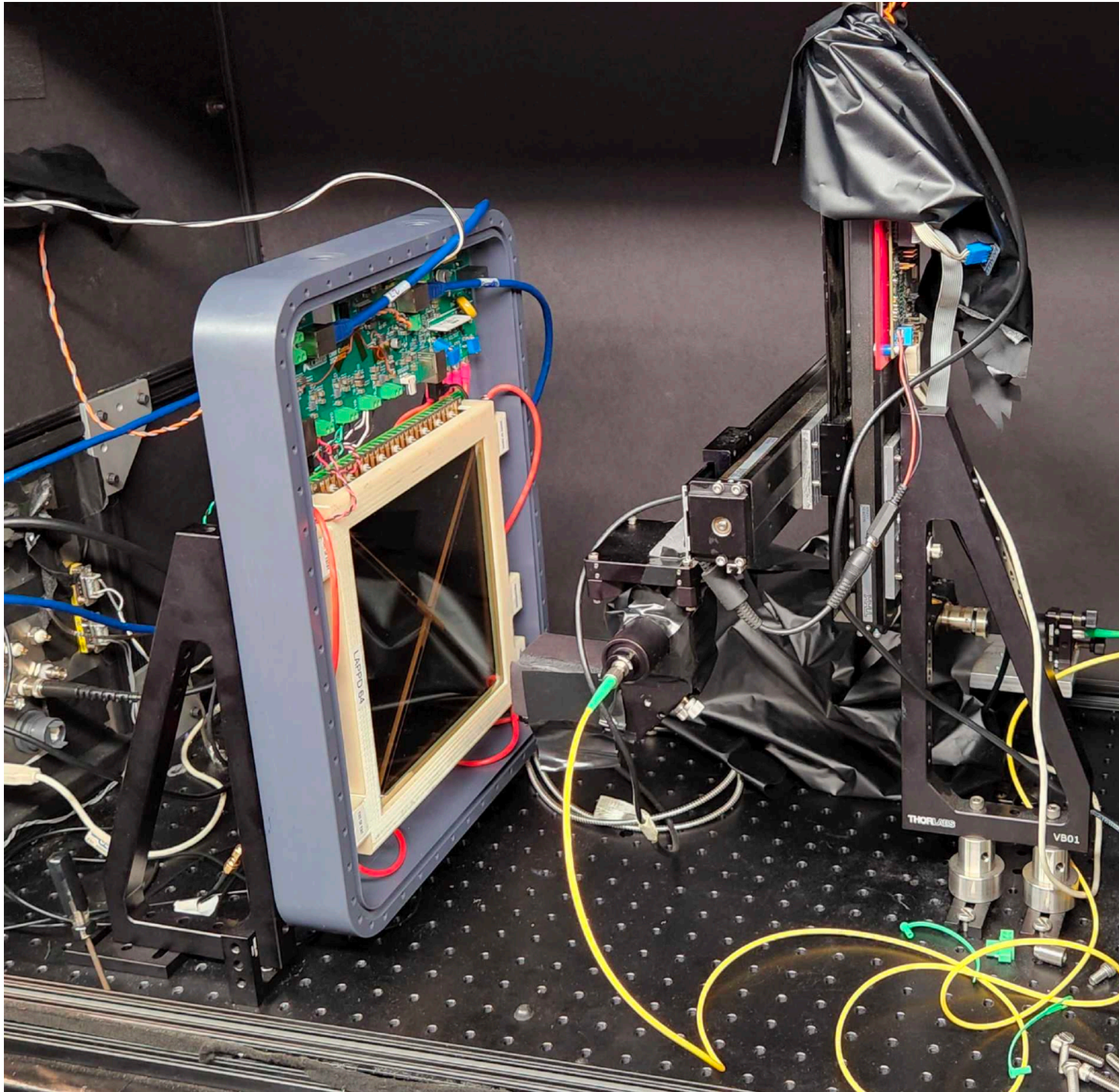


- ▶ The Crate 2, Card 14 HV was replaced.
- ▶ The HV card corresponding to Front Veto (FV) was unstable (after the beam-down period).
- ▶ Currently, the new card is working.

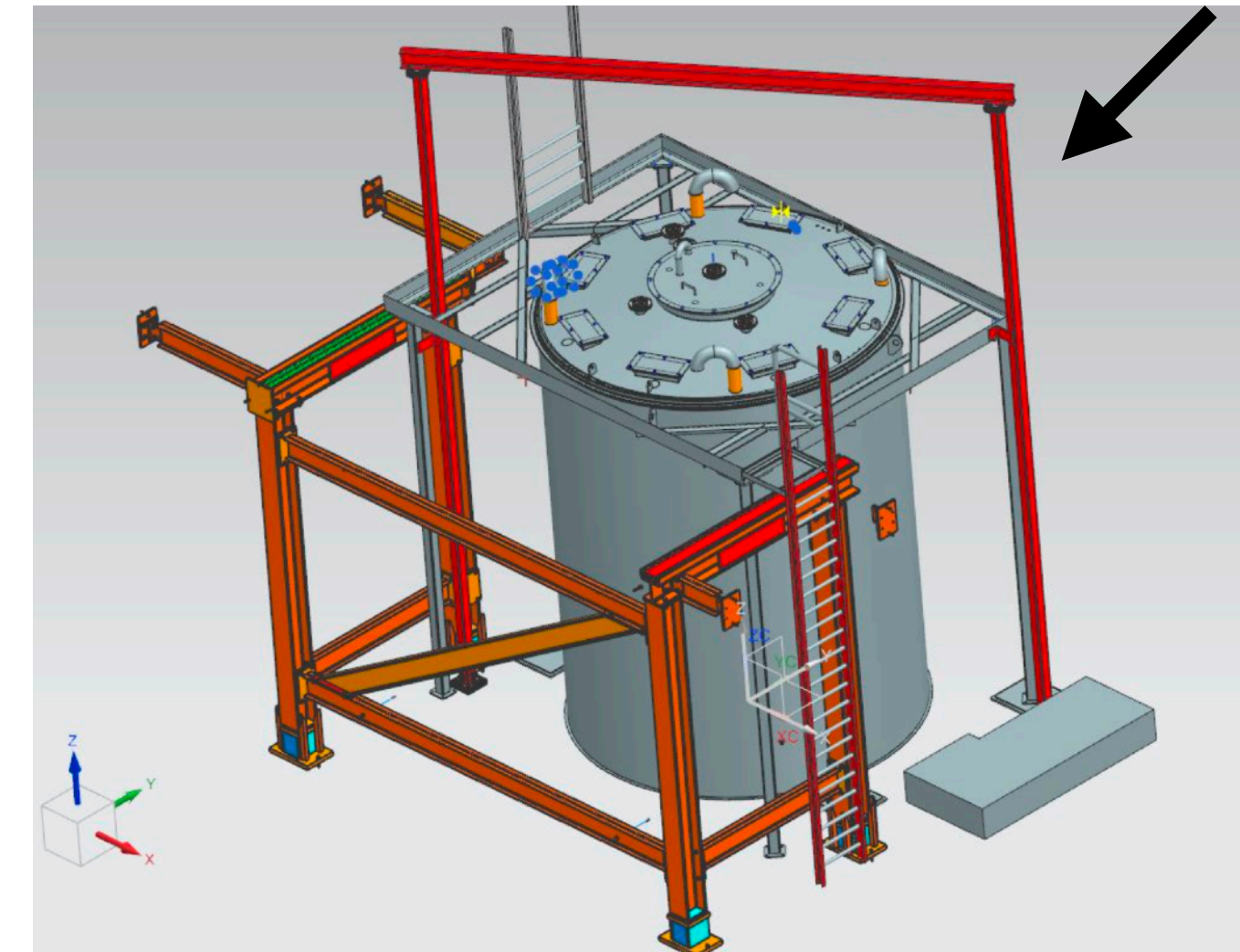
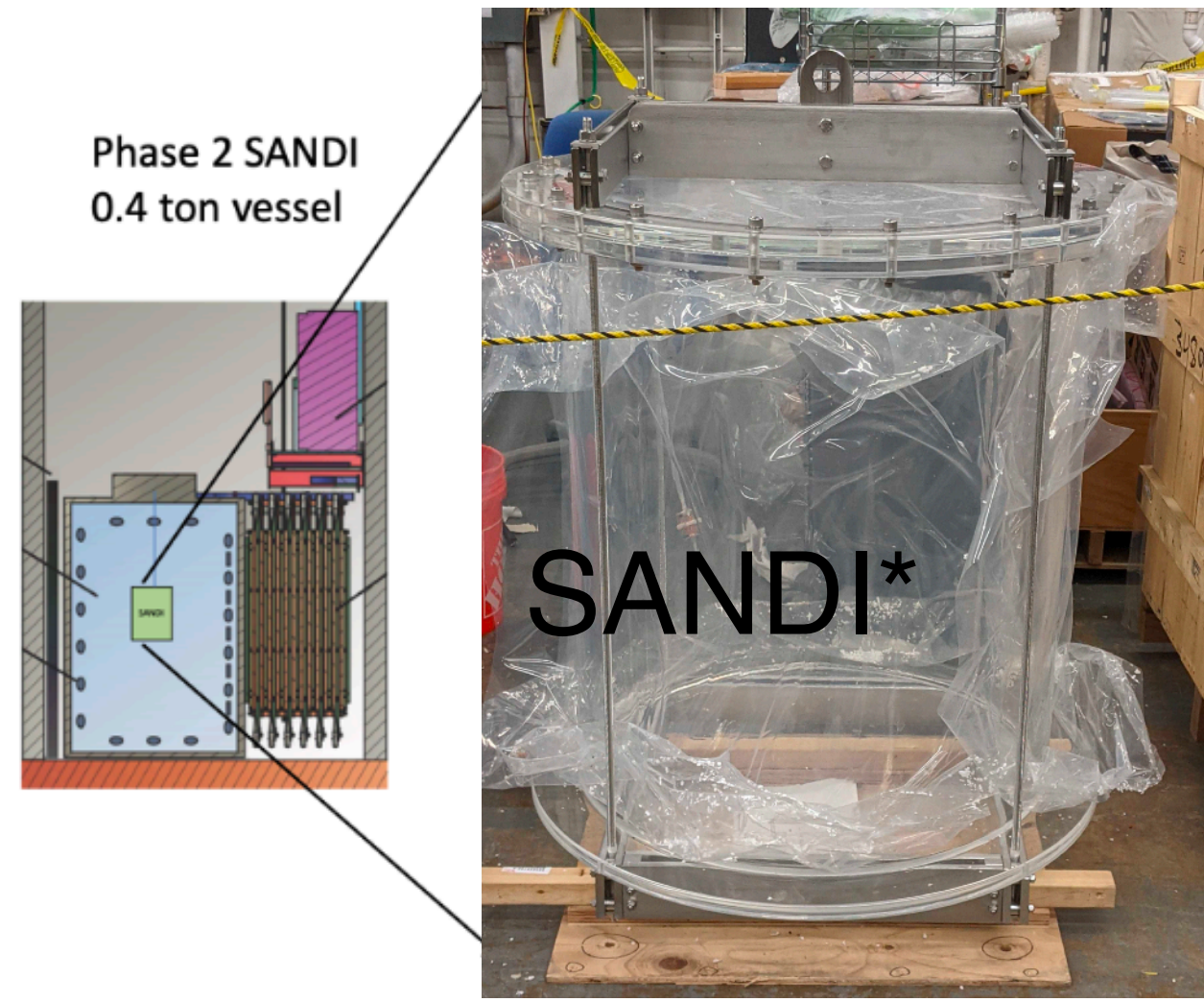


► Issues with VME02 crate Rack #6

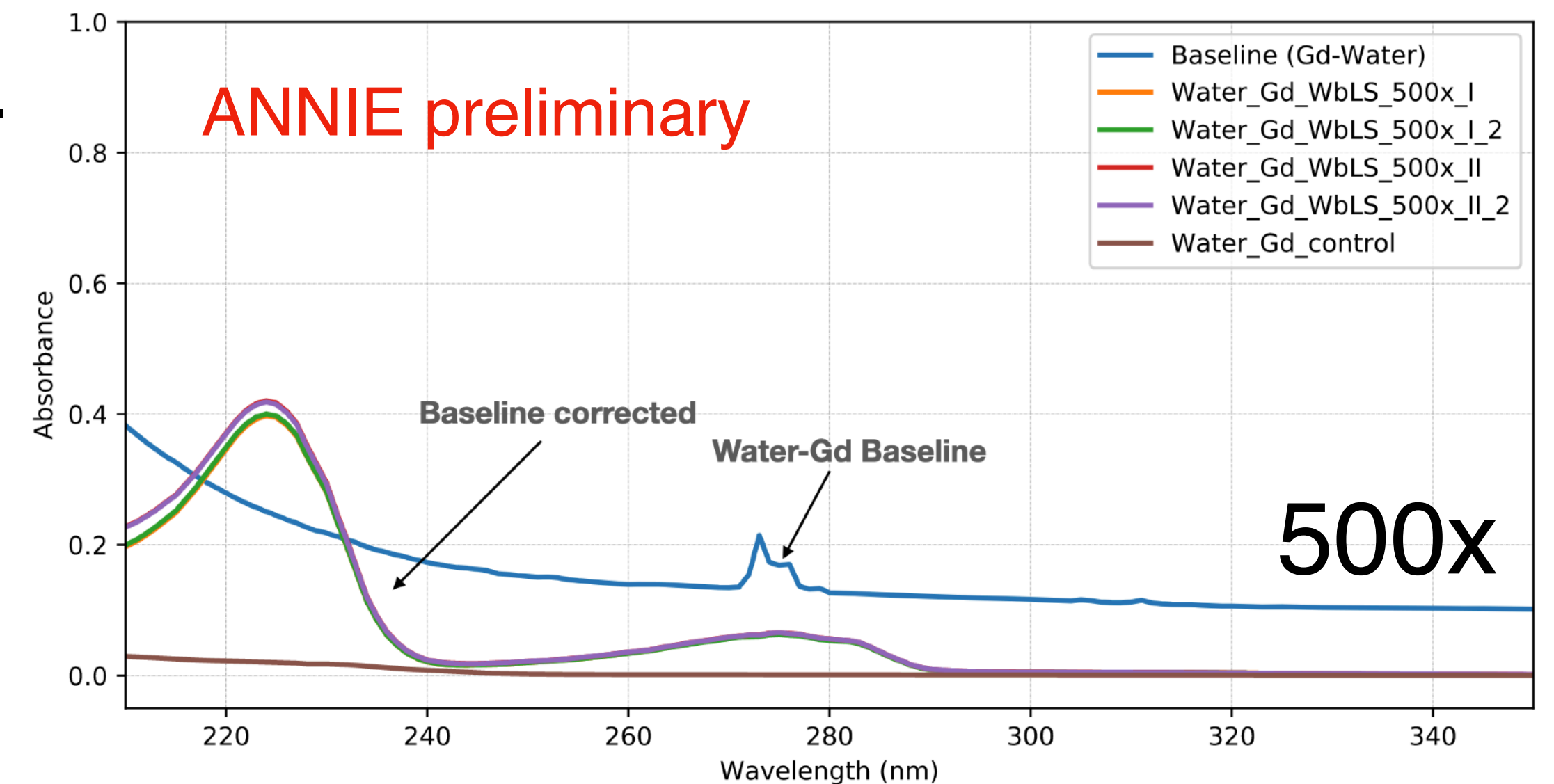
- Currently, the crate is fixed and operative in the hall.
- Tyler, from Steve Chappa's group, found an issue in the AC converter area. Additionally, the board was tightened and cleaned. Finally, the power cable was replaced.
- The plan is to check the VME 03 for an inspection to avoid future issues.

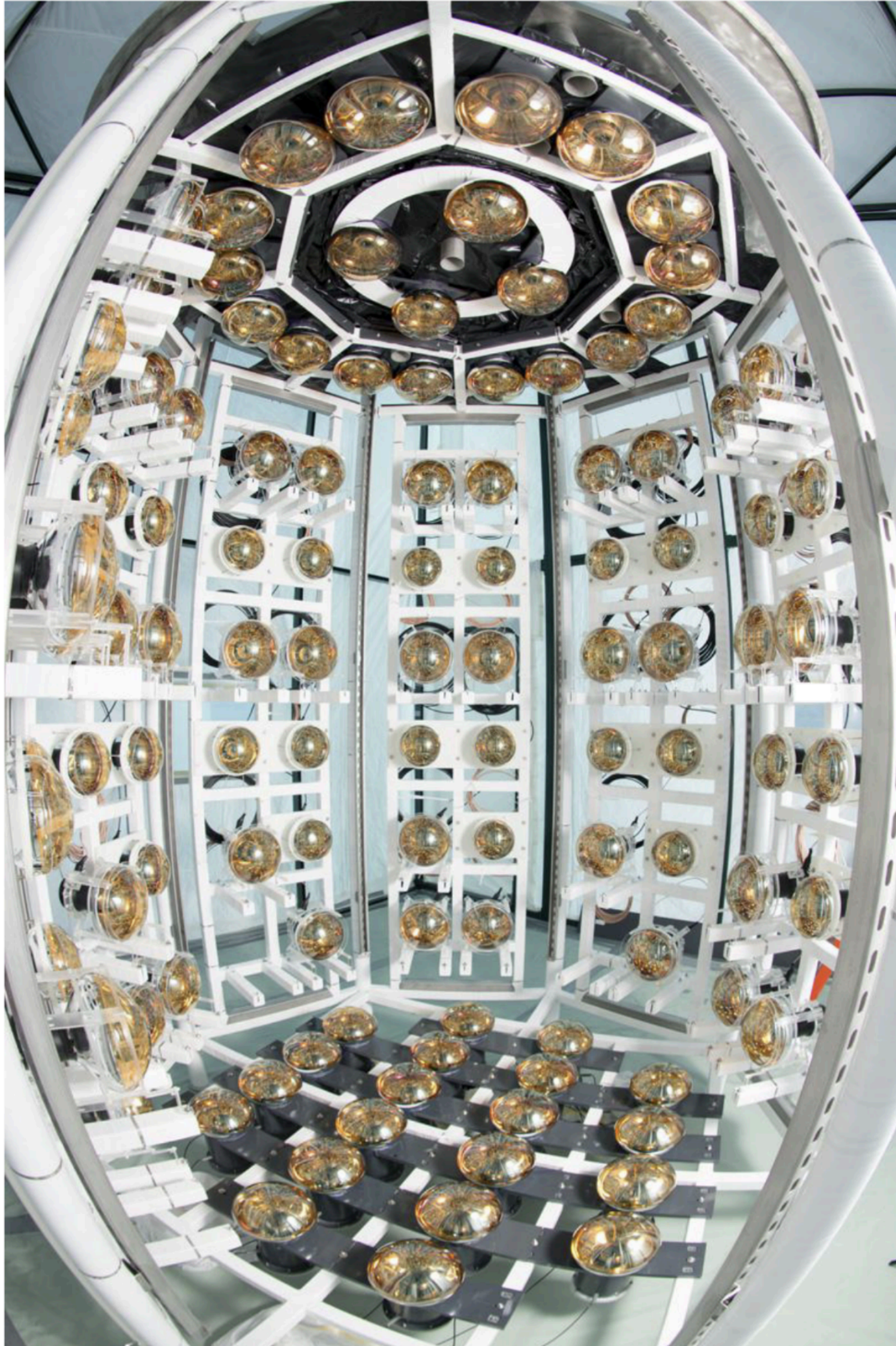


- ▶ The humidity and temperature of the deployed LAPPD are stable.
- ▶ LAPPD 64 is fully assembled and has the trigger board installed. We are testing (taking data with different voltage thresholds) in the darkroom (lab 6).



- ▶ We are still waiting for the work on the beams.
- ▶ We studied the WbLS dilution in the ANNIE tank. The lowest we can see 5000x dilution of 0.1% WbLS.
- ▶ Thanks to Brian from the Analytical and Chemistry Lab at lab6.





- ▶ Current status and plans:
  - **We are not taking data.** The DAQ OS update is in progress.

TODO (It depends on the DAQ):

- We need to take a more extended laser run and remove the Teflon ball from the tank.