



Detector Support Group

We choose to do these things "not because they are easy, but because they are hard".

Weekly Report, 2024-04-03

Hall A – ECAL

Marc McMullen

- Completed testing both power supply interface chassis
- Moved prototype heater controls into the radiation shielding bunker and restarted controls program

Hall A – LAPPD

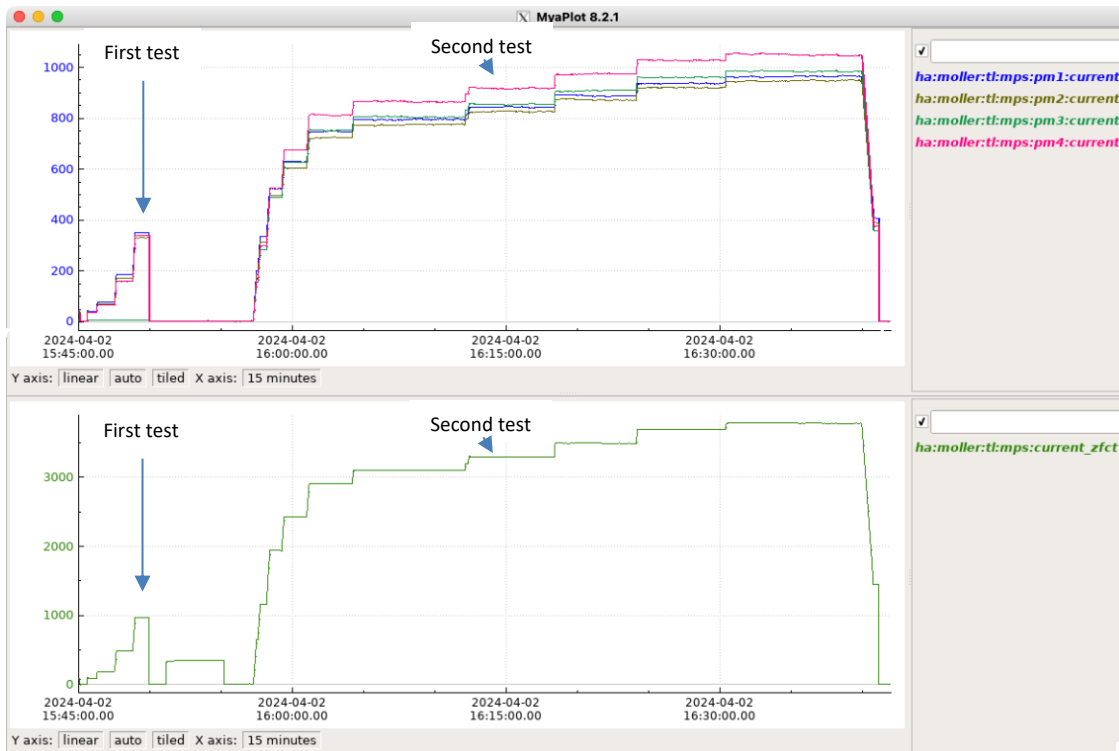
Pablo Campero

- Completed assembly of the 3D-printed LED box

Hall A – Møller

Brian Eng

- Tested direct current current transducers on individual power modules
 - ★ First tested to 1000 A with one pulse width modulation signals removed from the power module (to simulate a failure)
 - ★ Second test to 3900 A with all modules operational



Hall C – NPS

Aaron Brown and Mary Ann Antonioli

- Developed a Python program to generate plots of [all crystal temperatures for various days](#)
- Working on version 3 of control and monitoring LabVIEW program
 - ★ Added dew point calculation
 - ★ Made subVI to break out configuration file and added to Main VI; debugged issue of configuration file being read for each loop, instead of once



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Hall D – FCAL2

George Jacobs and Mindy Leffel

- Populated 45 PMT bases
- Stripped 360 wires
- Tested 138 PMT bases; 682 good bases tested
 - ★ One had shorted low voltage caps (output amplitude lower than expected) and one had no signal

EIC – DIRC

Tyler Lemon

- Completed new accelerometer system for barbox shipping crates
 - ★ Updated code to start new data files at the top of every hour
 - During testing, program started new data files at the top of every minute
 - ★ 3D-printed and assembled two controller boxes and 20 sensor boxes
- Installed accelerometer systems into shipping crates

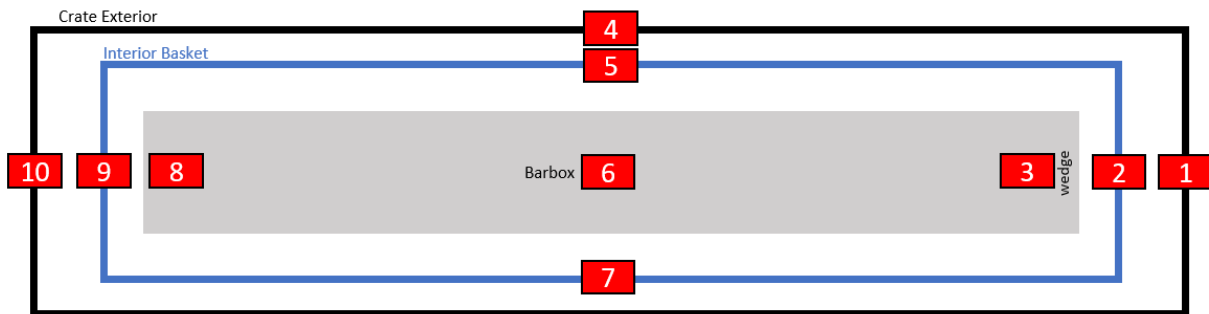
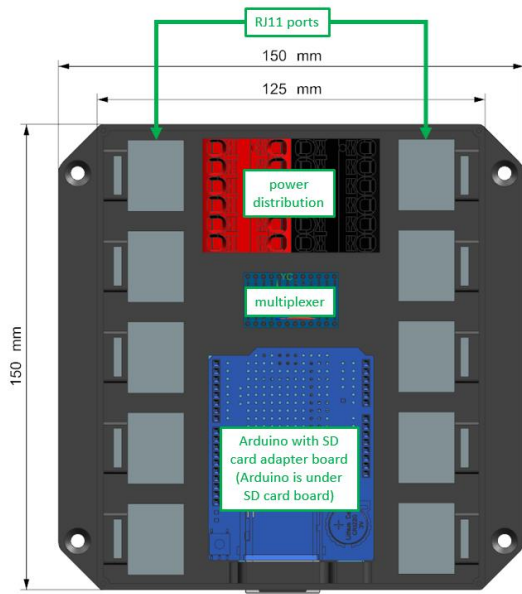


Diagram of accelerometer locations inside the shipping crate. Red rectangles indicate the sensors.

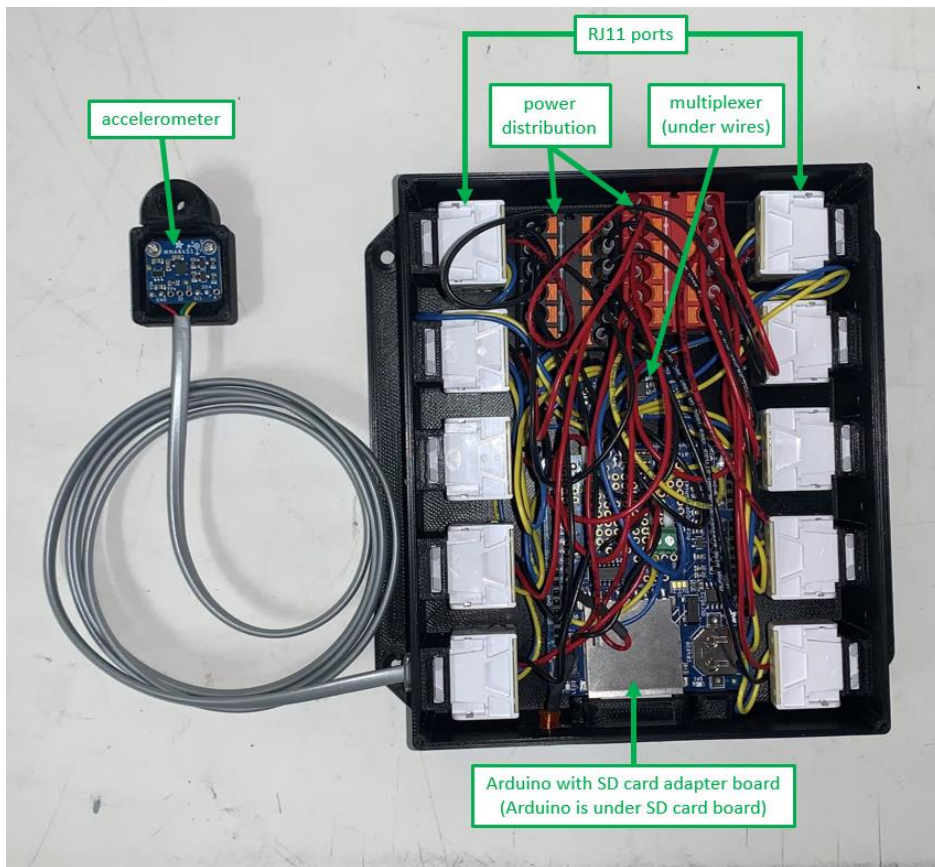
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Top view of controller box NX model showing interior components.

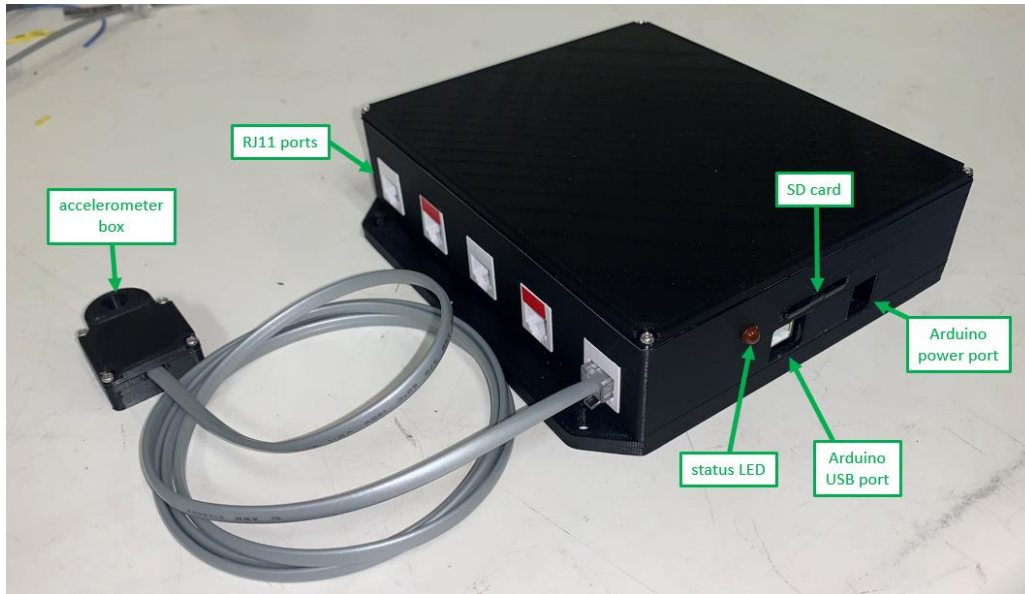


Top view photo of one controller box and one sensor box, without lids to show contents.

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Isometric view photo of one controller box and one sensor box. Sensors whose I²C address is 0x1c (vs. the standard 0x1d) should be connected to the two RJ11 ports indicated with red.

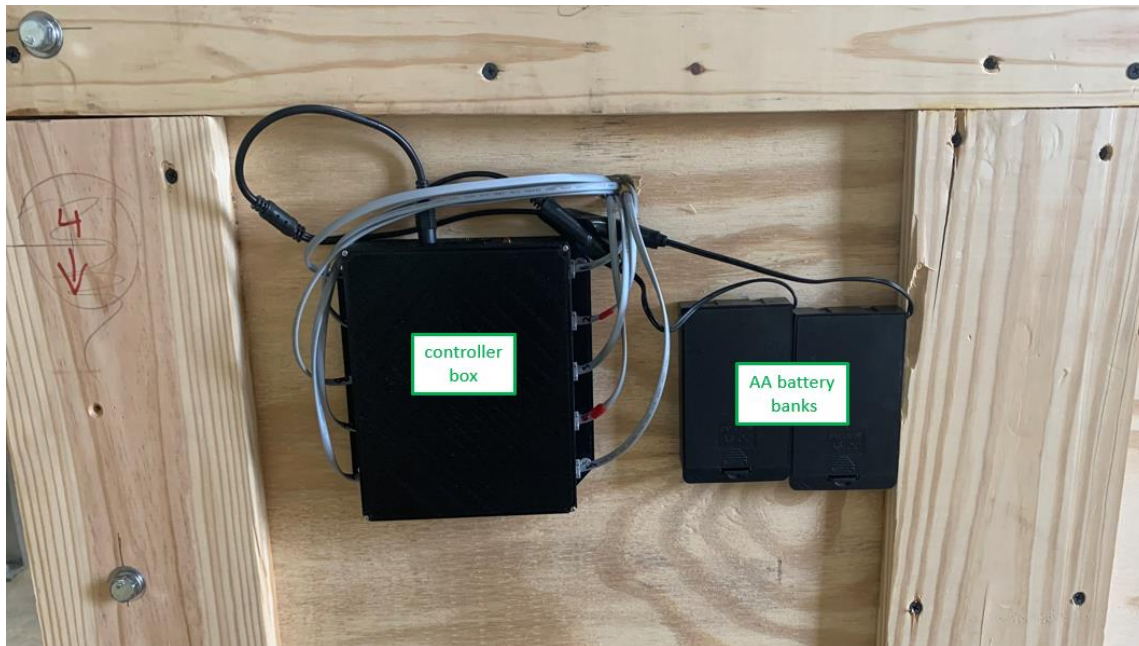


Photo of controller box and its battery pack mounted to outside of shipping crate.

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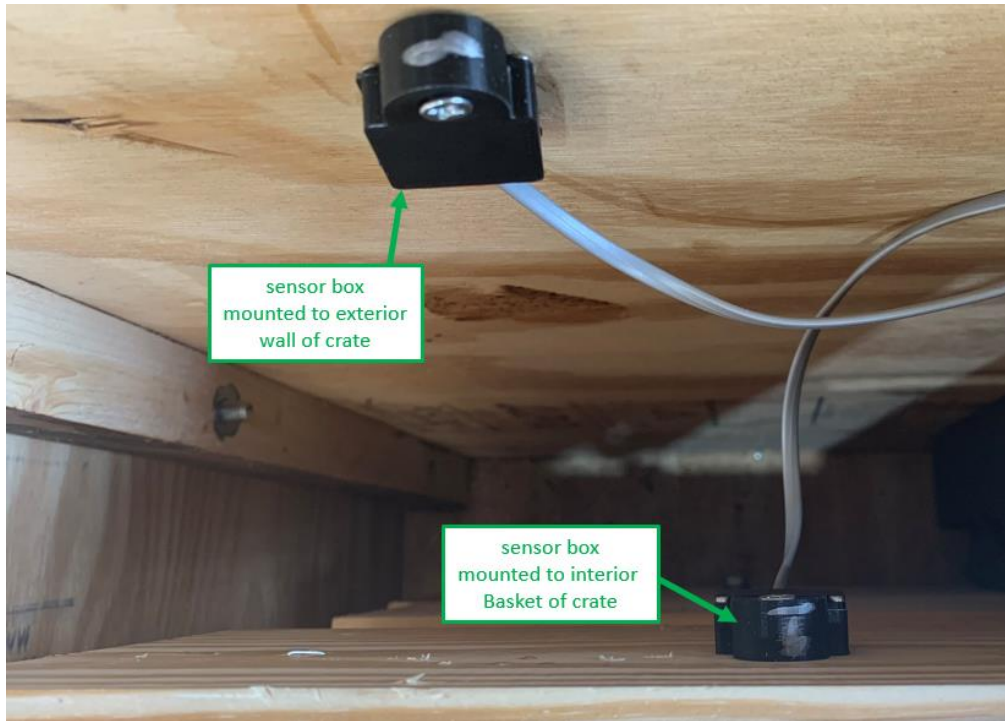


Photo of two sensor boxes mounted inside of a shipping crate.

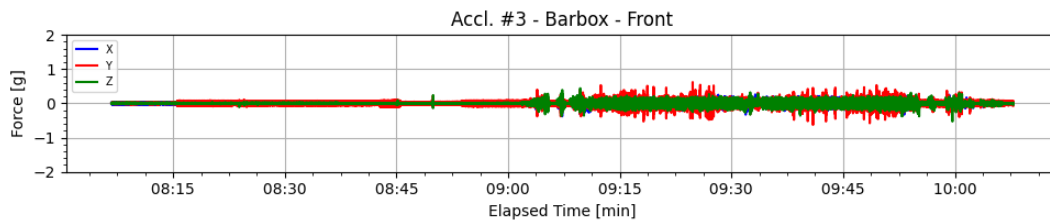
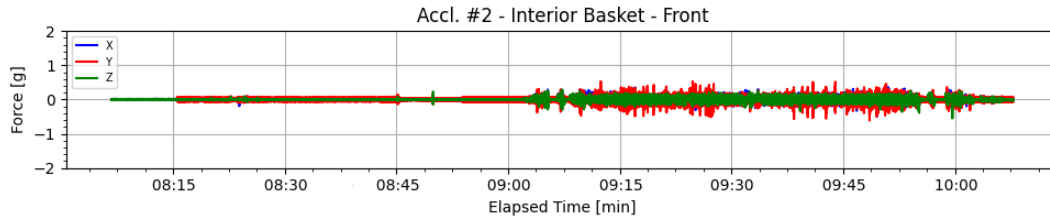
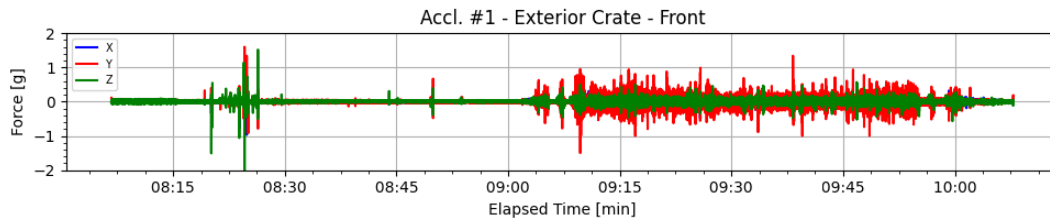
- Tested shipping crate suspension system with trucks that will be used for shipment
 - ★ Forces observed at the interior basket, which has an air suspension system, and at the barbox mock-up, which is supported by foam, are approximately half the magnitude of forces observed at the crate's exterior wall



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Accelerometer data for crate with barbox mock-up during drive test. Accelerometer #1, located on the exterior wooden crate, shows the undamped forces on the crate. Accelerometer #2, on the interior wooden basket, shows forces damped by the crate's air suspension system. Accelerometer #3, on the barbox mock-up, shows forces damped by both the air suspension system and foam padding.

DSG R&D

Peter Bonneau

- Evaluating Phoebus version 4.7.3 source code; version released 2/2024