



# Detector Support Group

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

**Weekly Report, 2023-11-01**

## **Hall A – ECAL**

*Brian Eng, Mindy Leffel, and Marc McMullen*

- Troubleshoot thermocouples sensors AI\_right and SM\_bottom
  - ★ Re-seating cRIO module fixed AI\_right sensor issue (oscillating between real value and disconnected value)
  - ★ Switched to redundant sensor to resolve SM\_bottom issue (temperature was not updating)
- Six-supermodule test stand heating started on 10/31
  - ★ Supermodule heaters set to 300°C, aluminum heaters set to 230°C
  - ★ Instructed ECAL lead, Don Jones, on how to operate the user interface to monitor and control

## **Hall A – Moller**

*Brian Eng*

- Started document about tests to perform on-site at OCEM after factory acceptance test is completed
  - ★ Tests include read/write and fault bits using the remote interface

## **Hall C – NPS**

*Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, Mindy Leffel, and Marc McMullen*

- Continued revision of LabVIEW control and monitoring software
  - ★ Created subVI to configure Keysight modules
  - ★ Created three subVIS—read TC, read DC, and read FRTD (four-wire RTD)—that are used in a fourth subVI that reads the Keysight

## **Hall D – FCAL2**

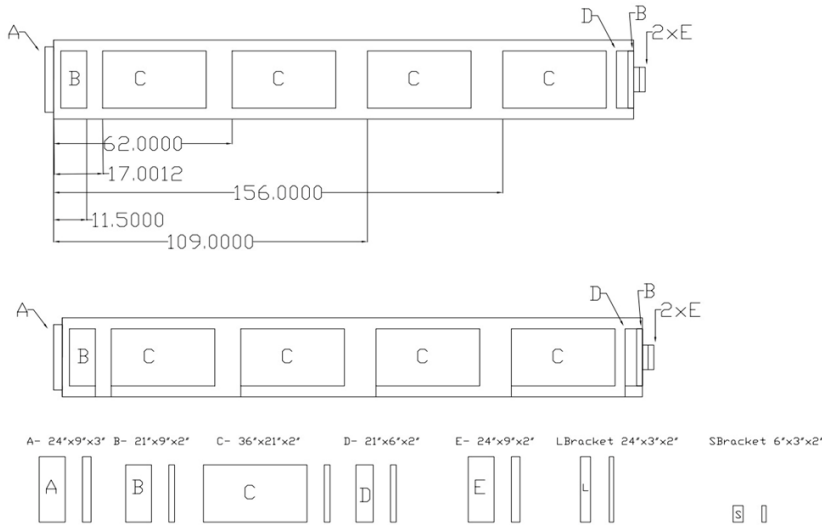
*Mindy Leffel*

- Populated 20 PMT bases; 725/1750 completed

## **EIC - DIRC**

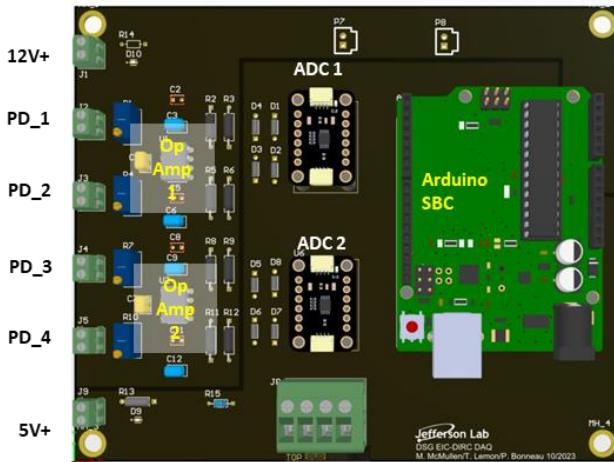
*Peter Bonneau, Brian Eng, George Jacobs, Tyler Lemon, and Marc McMullen*

- Compared inner wooden basket of old and new crates
  - ★ Wooden supports are in both, but no air suspension in new
  - ★ Verified old have full metal channel running underneath width of box
- Performed as-built survey of foam padding in old shipping crates; made drawing showing locations and dimensions



Foam dimensions and locations in old EIC DIRC crates

- Received 12 of 25 foam sheets for shipping crate padding; remaining 13 are expected end of November
- Received short and long wooden brackets from Shoreline Industries, Inc.
- Completed component placement on the data acquisition PCB



Altium rendering of the EIC DIRC DAQ board

- Measured, marked, and drilled holes for cRIO chassis DIN rails
- Reviewed DAQ schematic after modifications; made breadboard prototype of circuit

### EIC – Beampipe Thermal Test

#### Pablo Campero

- Attempted simulation; monitored velocity and energy residuals
  - ★ Solution in steady mode did not converge after 300 iterations
  - ★ Reworking mesh due to issues during first attempt of simulation