

## DSG-ECal Controls Meeting

**Date: June 14, 2023**

**Time: 3:15 – 4:00**

*Attendees: Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Donald Jones, Mark Jones, Tyler Lemon, Marc McMullen, Jack Segal, and Albert Shahinyan*

### **1. ECal heater power supply testing**

*Marc McMullen*

1. DSG has assembled a LabVIEW cRIO-based test stand to evaluate the Mean-Well HLG-600H-48B power supply to see if it is a viable candidate to provide power to the ECal heaters
  - The results were [presented](#) to the group with temperature range plots and noise measurements
  - PID-based controls were developed and used to control the output of the supply to power heaters
  - DSG noted that the Mean-Well supplies do not have any certification listed under the Jlab Nationally Recognized Testing Laboratory
    - Hall A will coordinate with EH&S for the full detector installation

### **2. Six-supermodule test stand**

*Hall A/DSG*

1. Hall A has disassembled the aluminum side heater bars and sent them to be machined to insert cartridge heaters
  - Each heater side will use 12 cartridge heaters
    - One side heater channel = ~12 A current draw at 48 V during maximum output periods (e.g., ramping)
    - The power supply output max is 600 W
2. Three of five Mean-Well HLG-600H-48B power supplies were delivered and are being tested by DSG
  - Two are on backorder. Hall A will order three to five more from a different vendor to use on the test stand

### **3. Open discussion**

1. Discussed safety interlocks for the full detector heaters
  - Hall A would like the full system to shut down, instead of a segmented group, if an over-temperature alarm occurs
  - DSG will test the remote shut-off function of the Mean-Well supplies