

DSG NPS Work Status Meeting

Date: July 30, 2020

Time: 10:00AM – 11:00AM

Attendees: Peter Bonneau, Aaron Brown, Brian Eng, George Jacobs, Tyler Lemon, Marc McMullen, Brad Sawatzky, Jack Segal, Stephen Wood

1. CAEN System Testing Status Update

- 1.1. Currently completing stability tests using EPICS. Thirteen of the 34 modules have been tested with 2 M Ω resistor load. Stability tests using GECO 2020 have been completed for 32 of 34 modules.
 - 1.1.1. Module #349 channel #13 never reached the set 1500 V (hovered around 70-80 V).
 - 1.1.2. A detail report of how modules performed will be provided once testing is completed.
- 1.2. For CAEN SY4527 crates and A7030TN modules currently in use in Hall C, firmware will be upgraded with the latest version before the experiment starts.
- 1.3. Decided to wait until a representative from CAEN can come to the lab to have the pin issue resolved for all modules rather than have the boards sent to Italy.

2. Cable Fabrication

- 2.1. Five hundred of ~1100 HV divider cables have been fabricated.

3. EPICS Controls & Monitoring Screens Development

- 3.1. Overview and Voltage/Current Readback screens are being developed. In addition to these screens, there will be a need to develop at least one controls screen to enable setting of voltage/current and ramp rates.
- 3.2. Discussed types of environmental monitoring screens and instrumentation that will be needed.
 - 3.2.1. Researching appropriate sensors for high radiation areas. Thermistors were suggested as they are more radiation hard.
 - 3.2.2. NPS Environmental Monitoring System Signal List can be found on DSG website: https://www.jlab.org/div_dept/physics_division/dsg/technical_documentation/Hall_C/NPS_3/Manuals_and_Specifications/NPS_Environmental_Monitoring_Signal_List.pdf

4. Planned Work

- 4.1. Discussed procurement of materials for, and fabrication of, thirty-four 140' multi-conductor cables.
 - 4.1.1. Received quotes from CAEN for 40 Radiall 52-pin connectors (\$17,587) and one Radiall insertion/extraction tool (\$333).
 - 4.1.2. Waiting for quote from General Wire for 6000 ft. of 52-conductor, 5 KV, multi-conductor wire; Hall D just purchased 2000 ft. at \$5.79 per foot.
 - 4.1.3. Brad will get clarification from Carlos regarding part numbers for connectors.

5. Miscellaneous

- 5.1. Progress on work done by DSG for NPS will be updated on the Hall C Technical Documentation section of DSG website: https://www.jlab.org/physics/dsg/technical_documentation/hall_c/NPS