

DSG-NPS Status Meeting Minutes

Date: July 01, 2021

Time: 09:00AM – 09:20AM

Attendees: Peter Bonneau, Aaron Brown, Pablo Campero, George Jacobs, Brad Sawatzky

1. HV supply cable fabrication/testing

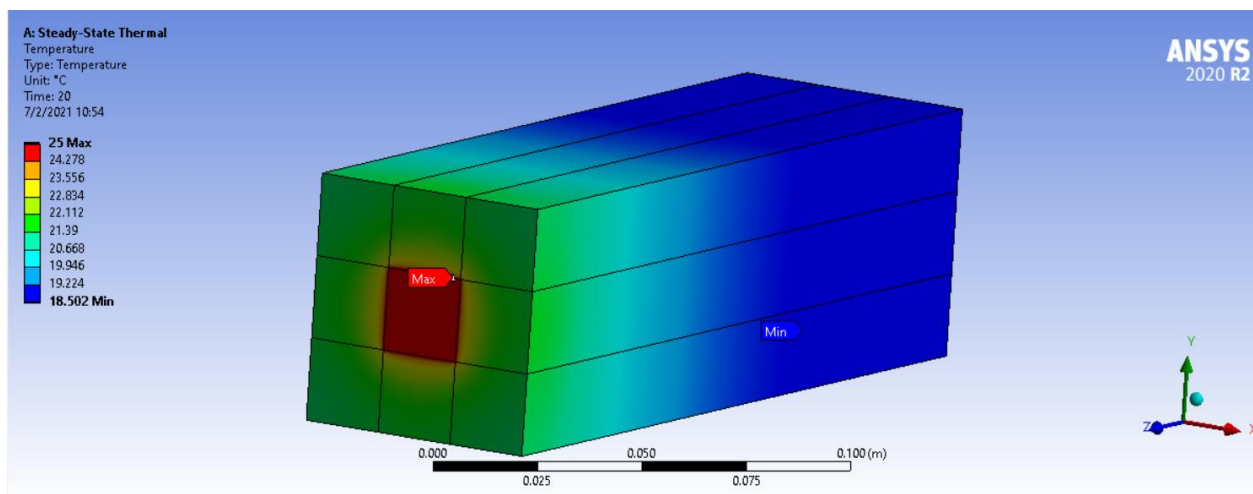
Peter Bonneau, Aaron Brown, Brian Eng, George Jacobs, Mindy Leffel, and Marc McMullen

1. Mindy Leffel has fabricated all 40 of the HV supply cables
2. Reviewed results of cable testing; 33 of 40 completed
 - Results are posted to [DSG's NPS Technical Documentation](#) webpage
3. Mindy Leffel is testing methods of [potting](#) (CAEN note, pg. 11) the Radiall 52-pin connector
 - Searching for an appropriate hot glue, as the type recommended by CAEN is not available outside of Europe

2. Thermal Analysis/Simulation

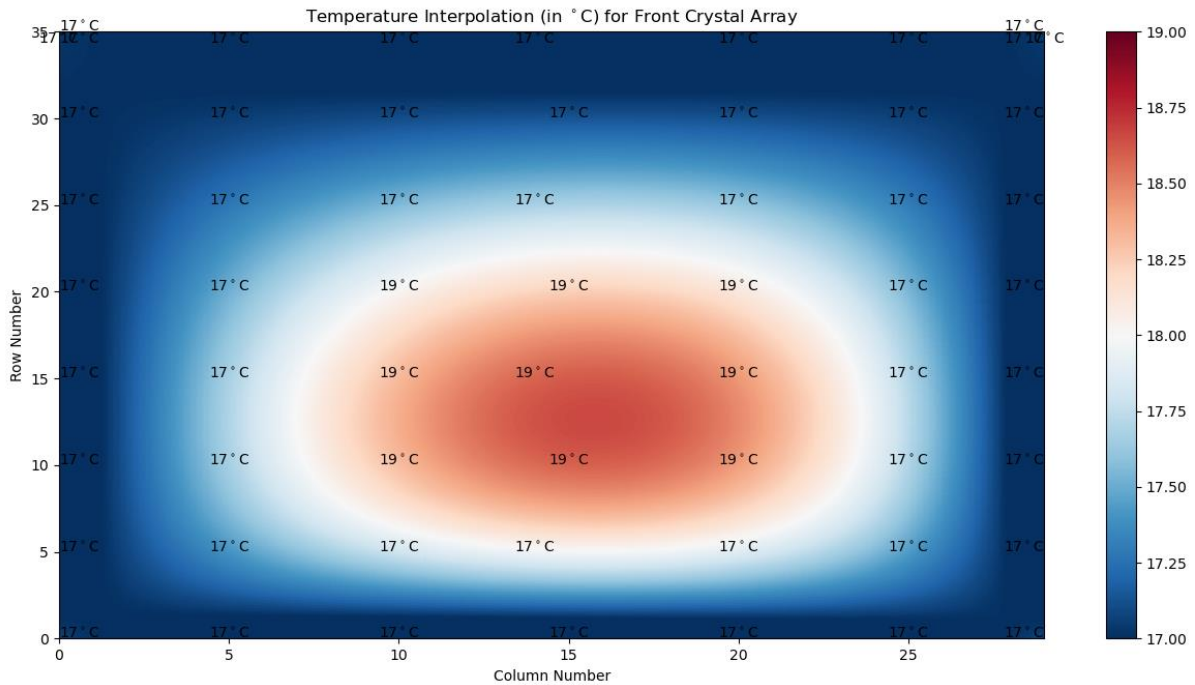
Aaron Brown

1. Reviewed and discussed Ansys thermal simulation
 - Applied 25° C to the face of the central crystal
 - A thermal conductivity of $2.4 \text{ W}\cdot\text{m}^{-1}\text{K}^{-1}$ in the x -axis and $2.0 \text{ W}\cdot\text{m}^{-1}\text{K}^{-1}$ in the y - and z -axes were applied to each crystal



Screenshot of Ansys thermal simulation

2. Discussed Python interpolation being conducted to estimate the temperature between sensors in the crystal array



Plot of Python bivariate spline interpolation with a central 3x3 block of temperature values at 19° C and all others at 17° C

3. Hardware interlock system development

Mary Ann Antonioli, Peter Bonneau, Aaron Brown, and Brian Eng

1. Reviewed procurement list of sensors and instrumentation; the majority of ordered components have been received
 - The cRIO chassis and ADC module are due on July 2
2. NPS assembly schedule has been delayed to after September, 2021
3. Will contact Paulo Medeiros for more information regarding the final location of, cable routing to, and space for mounting instrumentation in the shielded area behind the SHMS
4. Will contact Carlos Munoz for length of the Keysight terminal block D-sub extension cables