

## DSG-NPS R&D Meeting Minutes

**Date:** September 21, 2021

**Time:** 11:00 AM – 12:00 PM

*Attendees:* Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, and Marc McMullen

### 1. Reviewed 09/14/2021 R&D Meeting minutes

*DSG*

1. Link for details: [09/14/2021 DSG-NPS R&D Meeting Minutes](#)

### 2. Hardware Interlock System development

*Mary Ann Antonioli, Peter Bonneau, Aaron Brown*

1. Discussed calibrating thermocouples
  - Since the thermocouples are already embedded in the crystal array, a proper calibration won't be possible
  - Calculating offsets based on ambient hall temperature for each sensor may be the best option for calibration
  - Aaron Brown will reach out to Carlos Munoz to see if this option will be the best course of action
2. Discussed placement of RTD sensors throughout the detector volume
  - Sensors can be mounted to PCBs and attached to the detector frame with cable ties

### 3. Thermal Analysis

*Aaron Brown*

1. Reviewed slides for NPS Collaboration meeting
  - Slides detail work done to determine cause of similar temperature profiles for front and back faces of the crystal array
  - Appears that the 0.5 W heat load is not large enough to cause a significant difference in temperature between the front and back ends of the crystals

### 4. High Voltage Supply Cable testing

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

1. Mindy Leffel is fabricating test enclosure; Aaron Brown will give Mindy Leffel the pins she needs to finish fabrication of the test station
2. Marc McMullen has a 5 gal. bucket that can be used to test full length (140') cables