

DSG-NPS R&D Meeting Minutes

Date: August 11, 2021

Time: 9:30 AM – 10:30 AM

Attendees: Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Mindy Leffel, Tyler Lemon, Marc McMullen, and Amrit Yegneswaran

1. [Reviewed minutes from 08/03/2021 DSG-NPS R&D meeting](#)

DSG

1. [08/03/2021 DSG-NPS R&D Meeting Minutes](#)

2. [WBS](#)

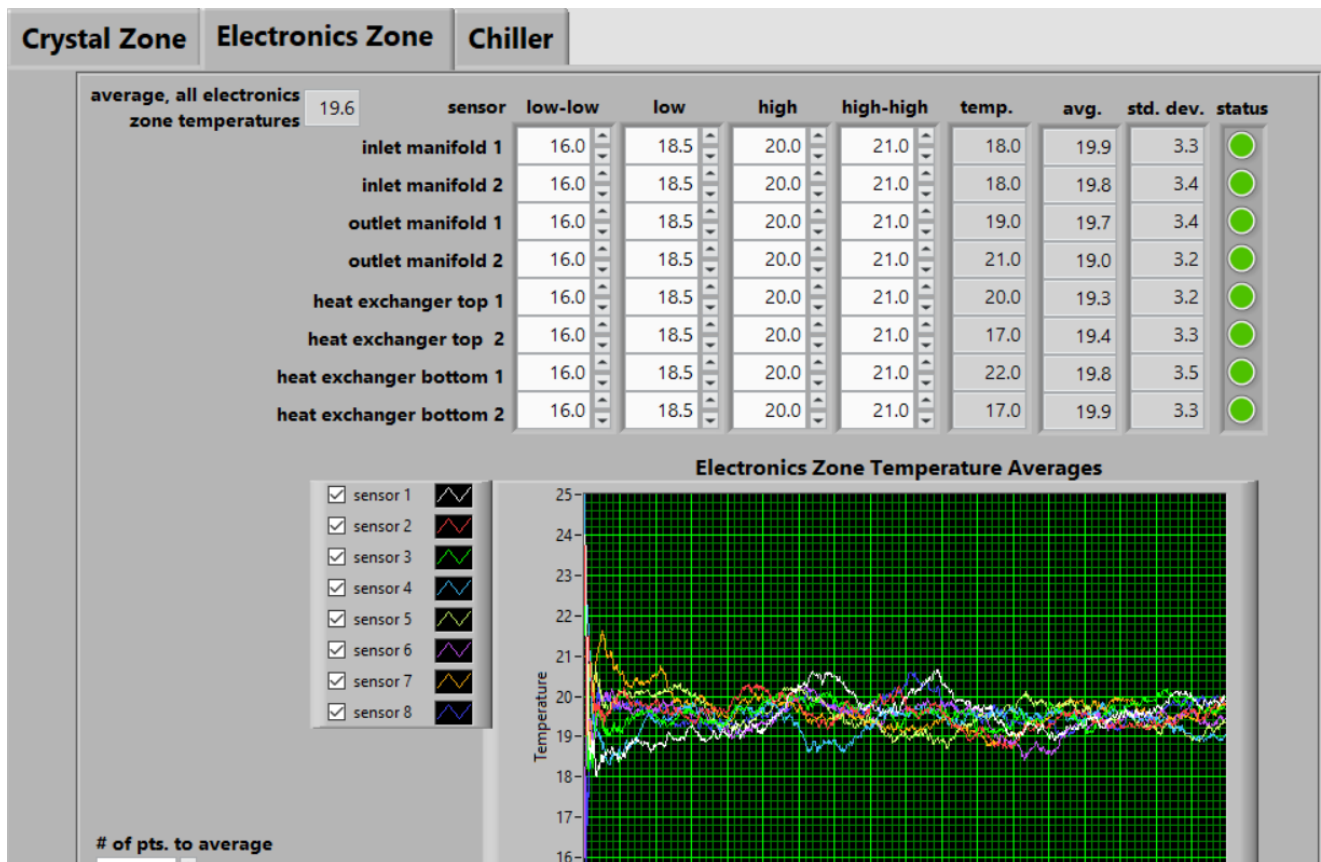
Peter Bonneau, Aaron Brown

1. Reviewed first iteration of NPS task schedule for FY2022
 - All hardware fabrication, software development, and research tasks will be added

3. [Hardware Interlock System Development](#)

Mary Ann Antonioli, Peter Bonneau, Aaron Brown

1. Reviewed *Electronics Zone* tab of LabVIEW Hardware Interlock Monitoring program
 - Discussed merits of using standard deviation of sample versus standard deviation of population; standard deviation of sample is what will be used

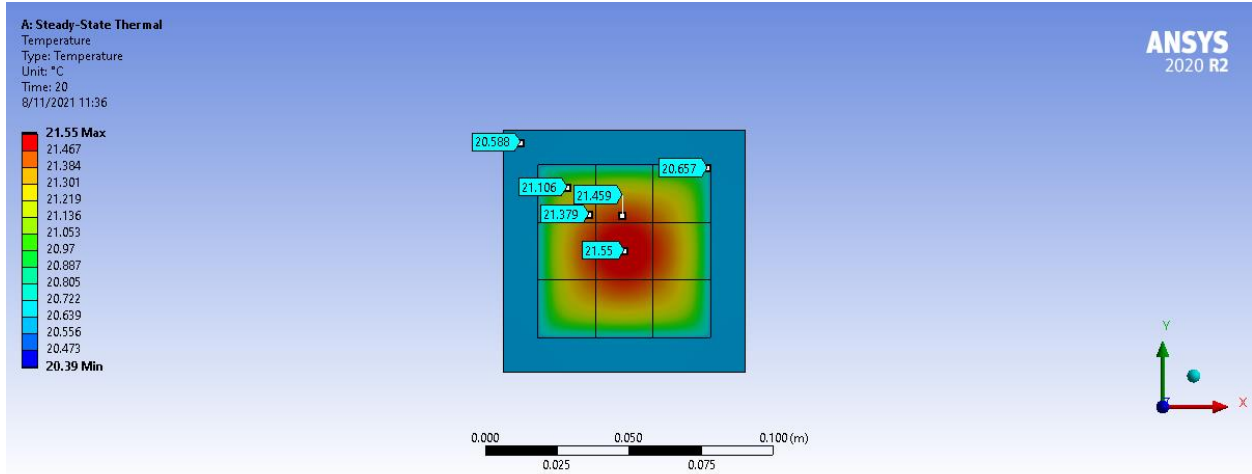


Screenshot of *Electronics Zone* tab from LabVIEW Hardware Interlock Monitoring program

4. Thermal analysis and Ansys simulation

Aaron Brown

1. Reviewed Ansys steady state thermal simulation of a 3x3 block of PbWO₄ crystal surrounded by a 1.2-cm Cu shell



Screenshot of 3x3 block of PbWO₄ crystal with a 1.2-cm copper shell

- A heat load of 0.5 W was applied to the face of each crystal, resulting in a maximum temperature of 21.55°C on the central crystal
- A lower film coefficient for convection (2.5 W/m² °C) was used for this simulation

5. HV supply cable testing

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

1. Testing of cable #40 with Radial connector on one end and flying leads on the other
 - Marc McMullen has submitted the DSG List; awaiting approval