

DSG-NPS R&D Meeting Minutes

Date: August 24, 2021

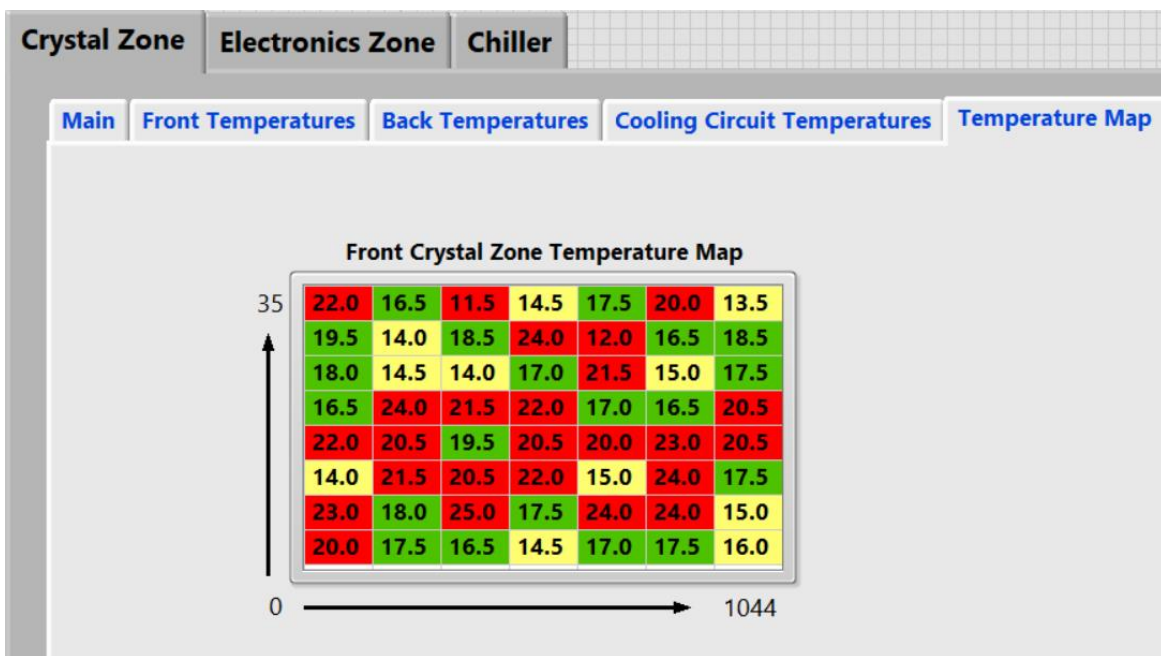
Time: 11:00 AM – 12:15 PM

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

1. Hardware Interlock System development

Mary Ann Antonioli, Peter Bonneau, Aaron Brown

1. Discussed *Temperature Map* tab for LabVIEW Hardware Interlock Monitoring program
 - Temperature map shows average temperature for each sensor
 - Map will be revised to show actual temperature for each sensor

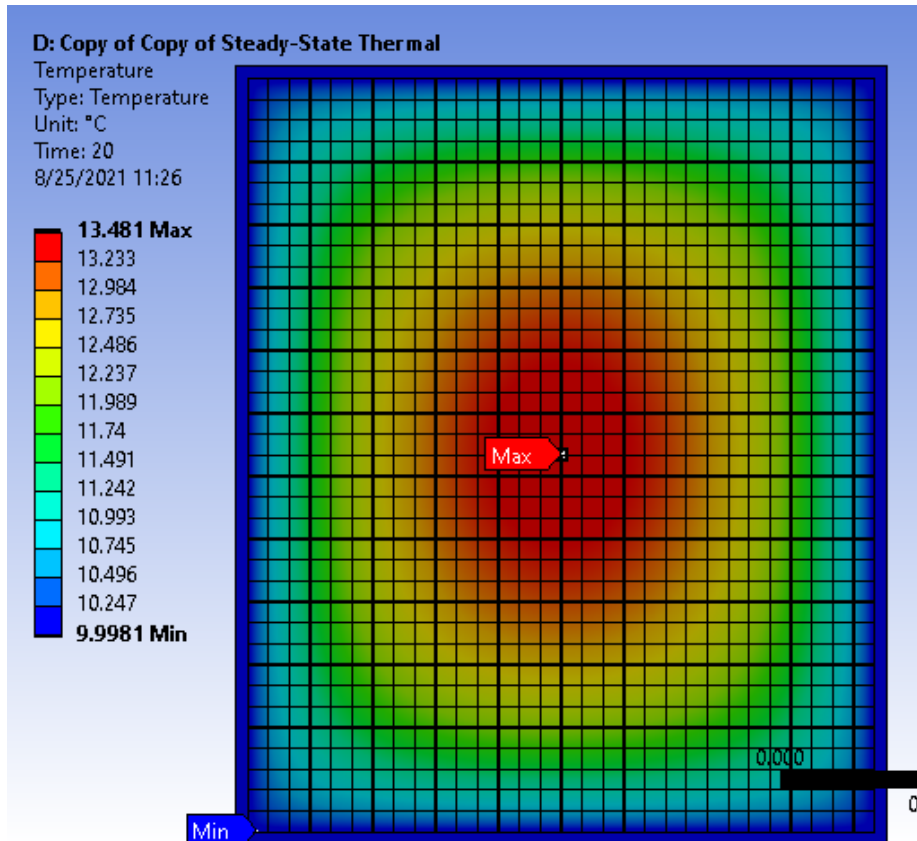


Screenshot of Temperature Map tab for the LabVIEW Hardware Interlock Monitoring program

2. Thermal analysis and Ansys simulation

Aaron Brown

1. Reviewed preliminary analysis conducted on full-sized model of 36x30 grid of PbWO₄ crystals surrounded by 1.2 cm Cu shell
 - Heat load of 0.5 W applied to rear face of each crystal
 - Maximum temperature (located on central crystal) of 13.48°C
 - Model needs the carbon fiber dividers between each crystal



Screenshot of thermal analysis done using 36x30 grid of PbWO₄ crystals; maximum temperature: 13.48°C

3. Databasing

Aaron Brown, Pablo Campero, George Jacobs

1. A local DSG MySQL database will be developed for drawings, notes, talks, etc. from each project
2. A DSG website search page will be developed as well

4. 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
 - Need banana plugs
 - Brian Eng will write a testing procedure