

DSG-NPS R&D Meeting Minutes

Date: June 15, 2021

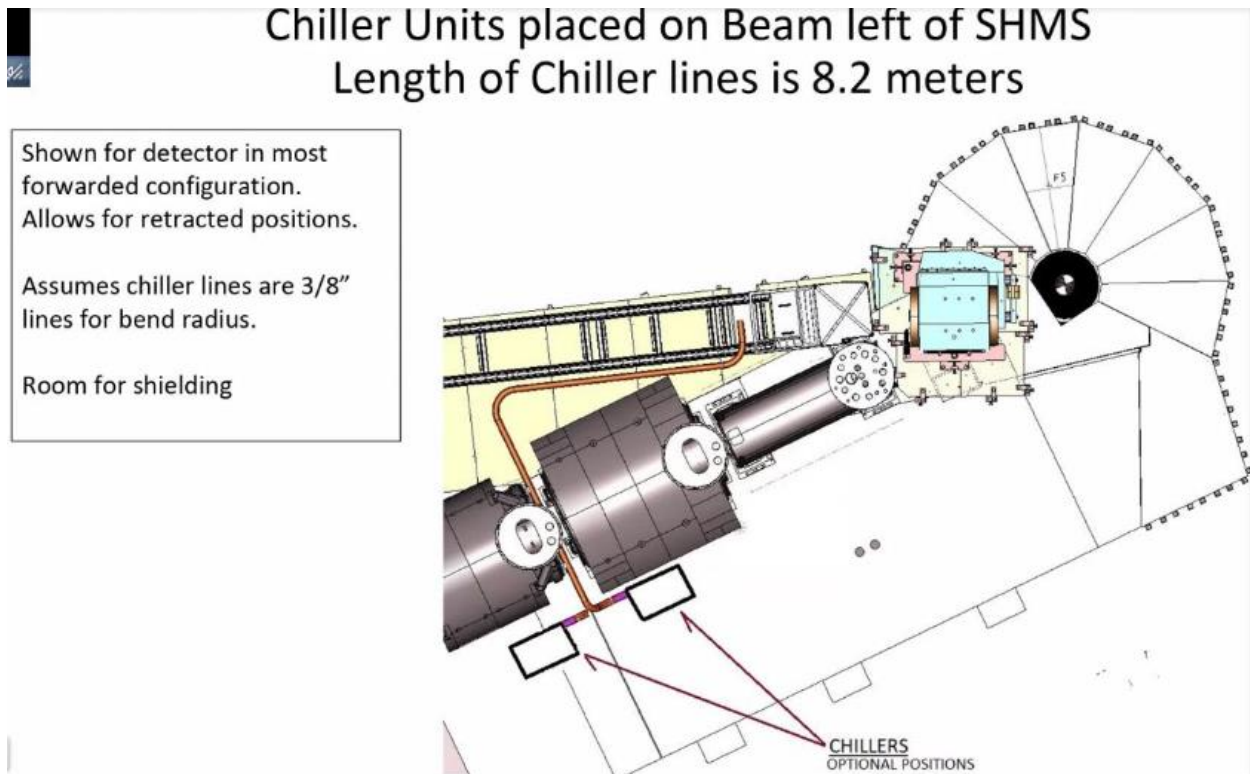
Time: 11:00AM – 12:10 PM

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, and Aaron Brown

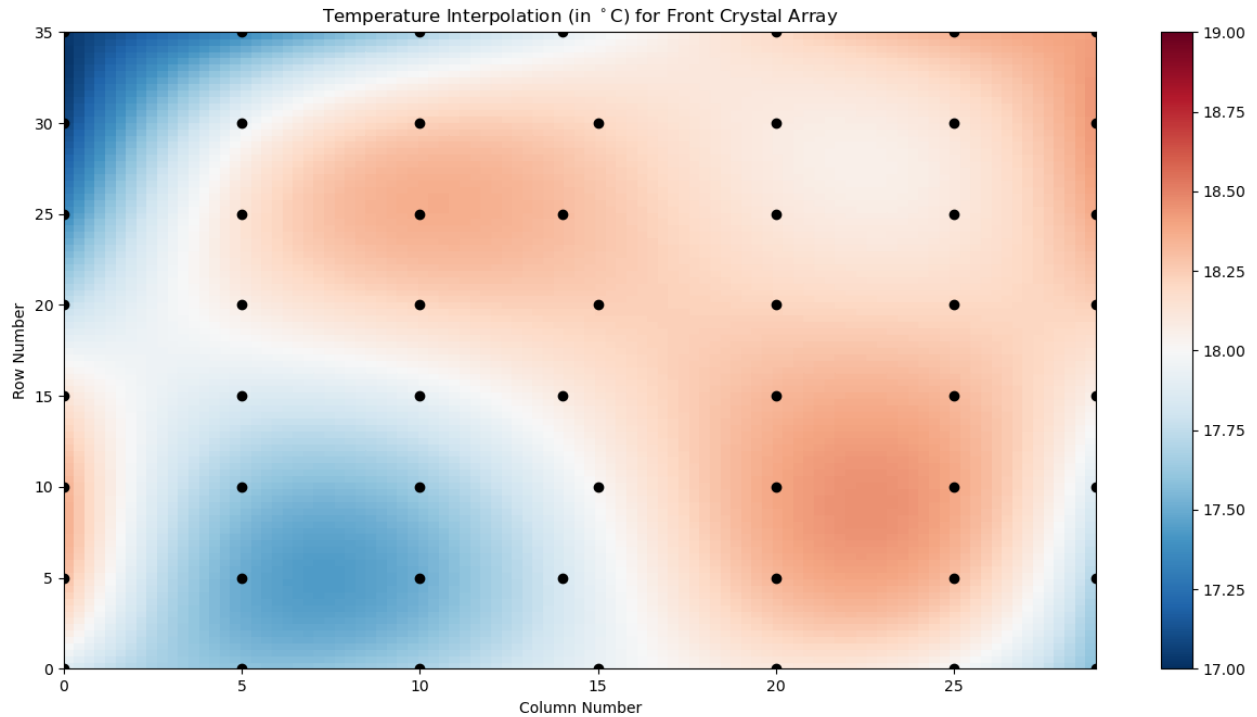
1. Reviewed spreadsheet detailing the number of multiplexers to be installed in the Keysight mainframe and the number and type of sensors connected to each multiplexer
2. Discussed distance from detector frame to the shielded area and need for D-sub extension cables
 - A drawing will be generated showing connections from the crystal zone thermocouples to the Keysight mainframe; mainframe and chillers to be located in the shielded area



Planned location of shielded area for chillers and Keysight mainframe (per Steven Lassiter)

3. Reviewed [cooling circuits presentation](#) from IPN Orsay

4. Reviewed surface plot of the front crystal zone temperatures generated using random numbers between 17°C and 19°C
 - An ANSYS thermal simulation will be done to determine temperature across the entire crystal array



Surface plot of interpolated front crystal zone temperatures generated using random numbers for the 56 temperature sensors

2. **HV supply cable fabrication/testing**

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

1. Mindy Leffel has completed fabrication of the 140' HV supply cables – 40 total
2. Long-term cable testing, with load, in progress; plots uploaded to [DSG NPS Technical Documentation](#) webpage