DSG-NPS R&D Meeting Minutes

Date: August 29, 2023
Time: 02:00 PM – 02:30 PM

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

1. **Debugging thermal readback and chiller controls**
   Mary Ann Antonioli, Aaron Brown, and Brian Eng
   1. Debugged configuration file subVI after it stopped working
      - Issue was caused by changing the trip delay values (and other variables) from single values to arrays
      - Created 32 new PVs for the crystal zone and electronics zone chillers' alarms and indicators
      - Broke up the chiller alarm and indicator arrays and changed each element to a double from a Boolean
      - Mary Ann is making a subVI of this process for use in the newest version of the program
      - Investigating the cause of the issue
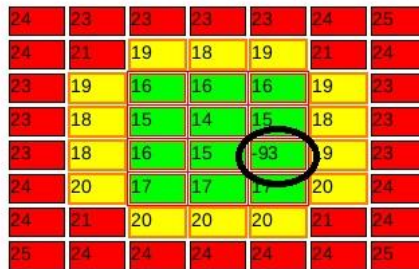
2. Detector installation/checkout
Aaron Brown
1. Investigating unusual values from crystal array thermocouples
   - The sensor value circled in black below was from a thermocouple attached to the front of the crystal array
   - Unexpected temperature values could be result of Keysight terminal block connectivity issues for the thermocouples, or a bad sensor; will check connectivity of all thermocouples

Back Crystal Zone Temperatures

25	24	24	20	24	-9900	-9900
24	22	20	16	20	-9900	-9900
24	20	18	18	18	-9900	-9900
24	25	17	25	17	-9900	-9900
24	20	17	24	18	-9900	-9900
24	21	19	17	19	-9900	-9900
24	22	21	17	21	-9900	-9900
25	25	24	21	24	-9900	-9900

Front Crystal Zone Temperatures

24	23	23	23	23	24	25
24	21	19	18	19	21	24
23	19	16	16	16	19	23
23	18	15	14	15	18	23
23	18	16	15	93	19	23
24	20	17	17	17	20	24
24	21	20	20	20	21	24
25	24	24	24	24	24	25

3. Ansys transient thermal simulation analysis
Aaron Brown
1. Redoing transient analysis plots
   - Plotting data of 1°C increase and decrease fitted with exponential curves