DSG-NPS R&D Meeting Minutes

Date: January 11, 2022
Time: 11:00 AM – 11:20 AM

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

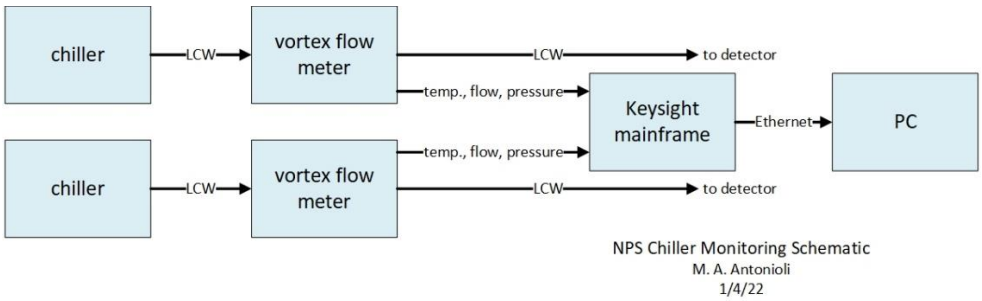
1. Hardware Interlock System Development

Mary Ann Antonioli, Peter Bonneau, and Aaron Brown

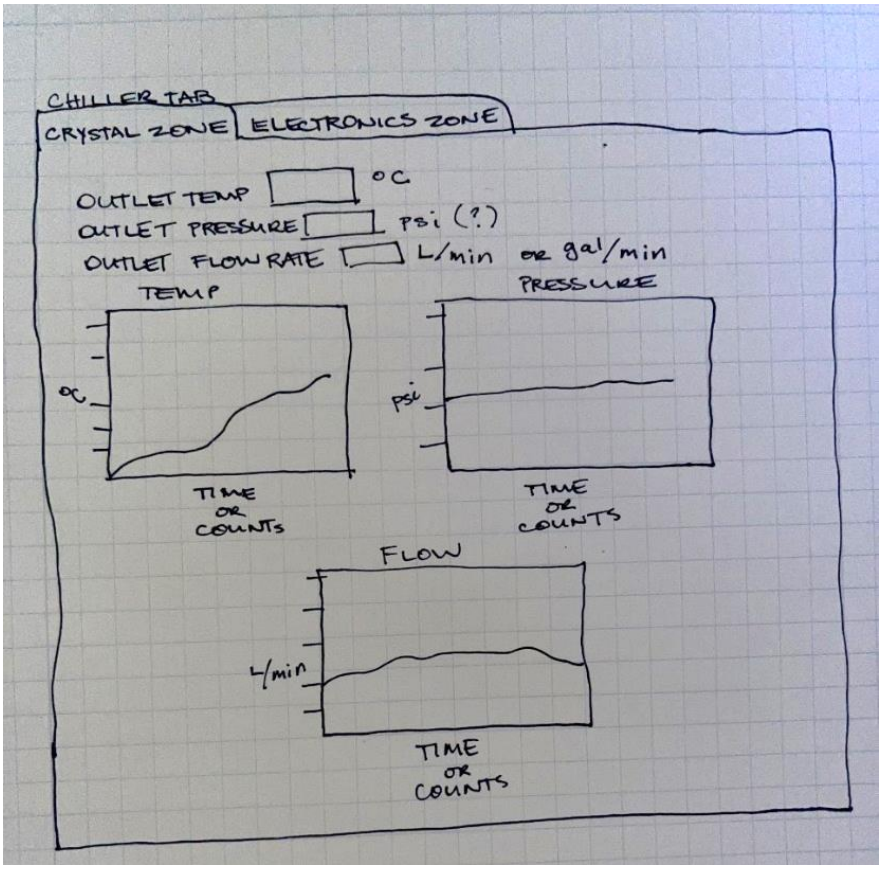
1. Reviewed *CAEN Module and Channel On/Off* Phoebus screen
   - Screen generated using a Python script
     - Contains buttons to turn on/off all channels of both crates, all channels of a module, or each channel individually
   - A link to a table detailing PMT channel assignments will be added to the screen
2. Will check that PMT, crystal, and high voltage channels are all mapped

Screenshot of *CAEN Module and Channel On/Off* Phoebus screen

3. Reviewed sketch of *Chiller* tab for Hardware Monitoring LabVIEW screen
   - Model numbers for crystal zone and electronics zone chillers will be added to subtabs
   - Units on tab will match units found on chiller front panel



NPS chiller monitoring schematic



Sketch of Chiller tab for Hardware Monitoring LabVIEW screen

2. **Ansys Thermal Analysis**
   Mary Ann Antonioli and Aaron Brown
   1. Adding temperature probes to the front and rear faces of each crystal to aid in determining the temperature profile across crystal faces
   2. All front crystal face probes placed; 758 of 1080 rear crystal face probes placed

3. **Enhanced Specular Reflector Film Pre-shaping Progress**
   George Jacobs and Mindy Leffel
   1. 585 of 600 foils completed (~97%)

4. **Database Development**
   Aaron Brown, Pablo Campero, Brian Eng, and George Jacobs
   1. Completed operating procedure for Python program to generate plots for CAEN high voltage system modules' voltage and current stability of each channel
   2. Will contact Sherman White for access to a DocDB server

5. **High Voltage Supply Cable Testing**
   Aaron Brown, George Jacobs, Mindy Leffel, and Marc McMullen
   1. George Jacobs has started voltage drop testing of the 140' cable – seven of 36 cable channels tested