DSG-RICH R&D Meeting

Date: February 7, 2022
Time: 11:00 AM – 12:00 PM

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

1. Spherical mirrors

1. Fabrication of new mirror support parts
   - Resin and tank for 3D printer delivered to EEL
   - Fabrication of mirror support mounts underway
     - First batch of 12 complete, 24 of 36 remain
     - Will send photos to INFN collaborators before proceeding with remaining 24.
2. Estimated time for testing mirrors at CMA is February 28 – March 4, 2022
   - Travel authorization paperwork in progress
   - Tentative timeline for travel:
     - Day 1 – travel to CMA in Tucson, AZ; set up test station
     - Day 2 – 4 – measure d0 for remaining eight spherical mirrors
     - Day 5 – return home

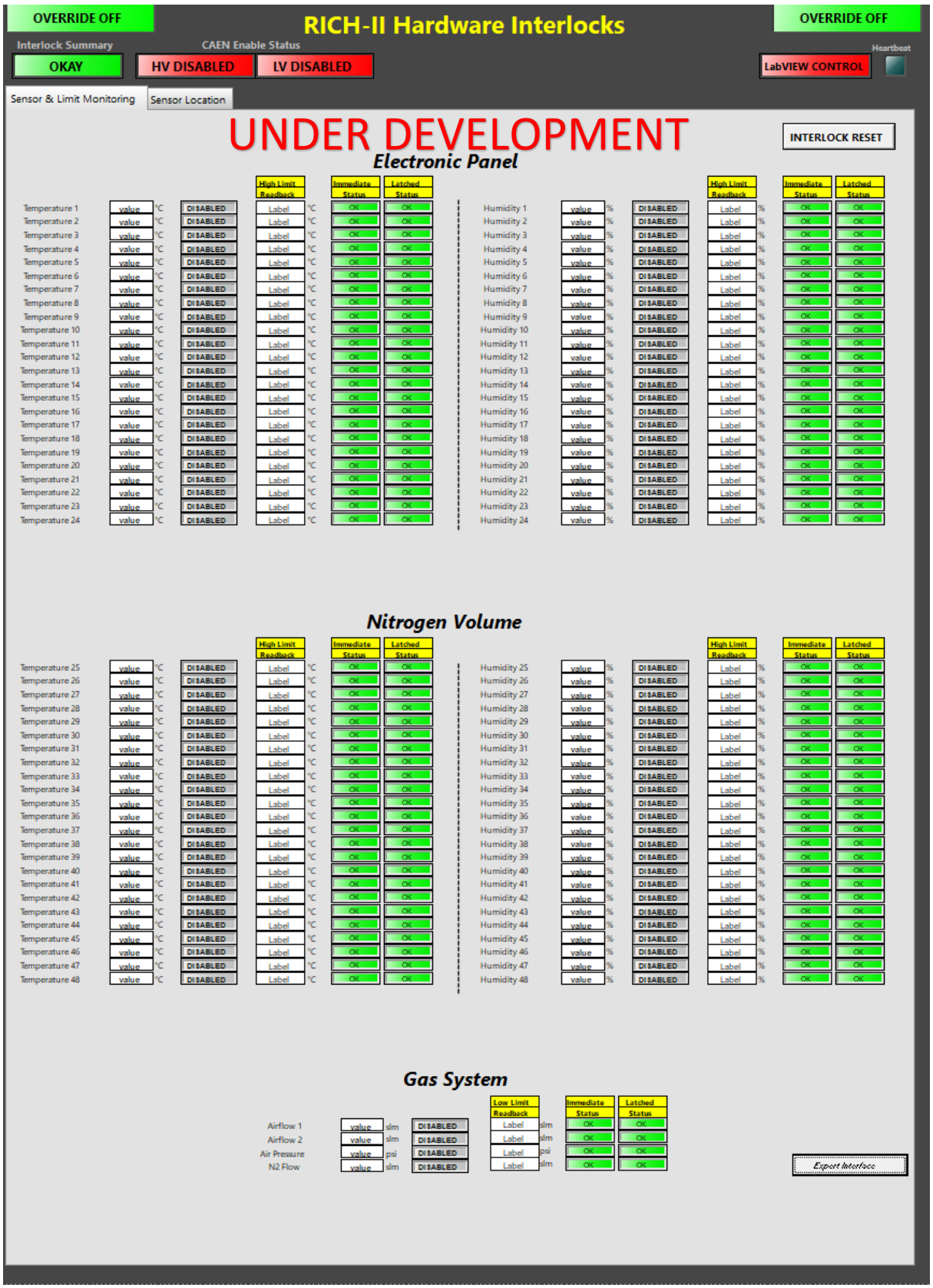
2. Chassis to house hardware interlock system

Mindy Leffel, Tyler Lemon, and Marc McMullen

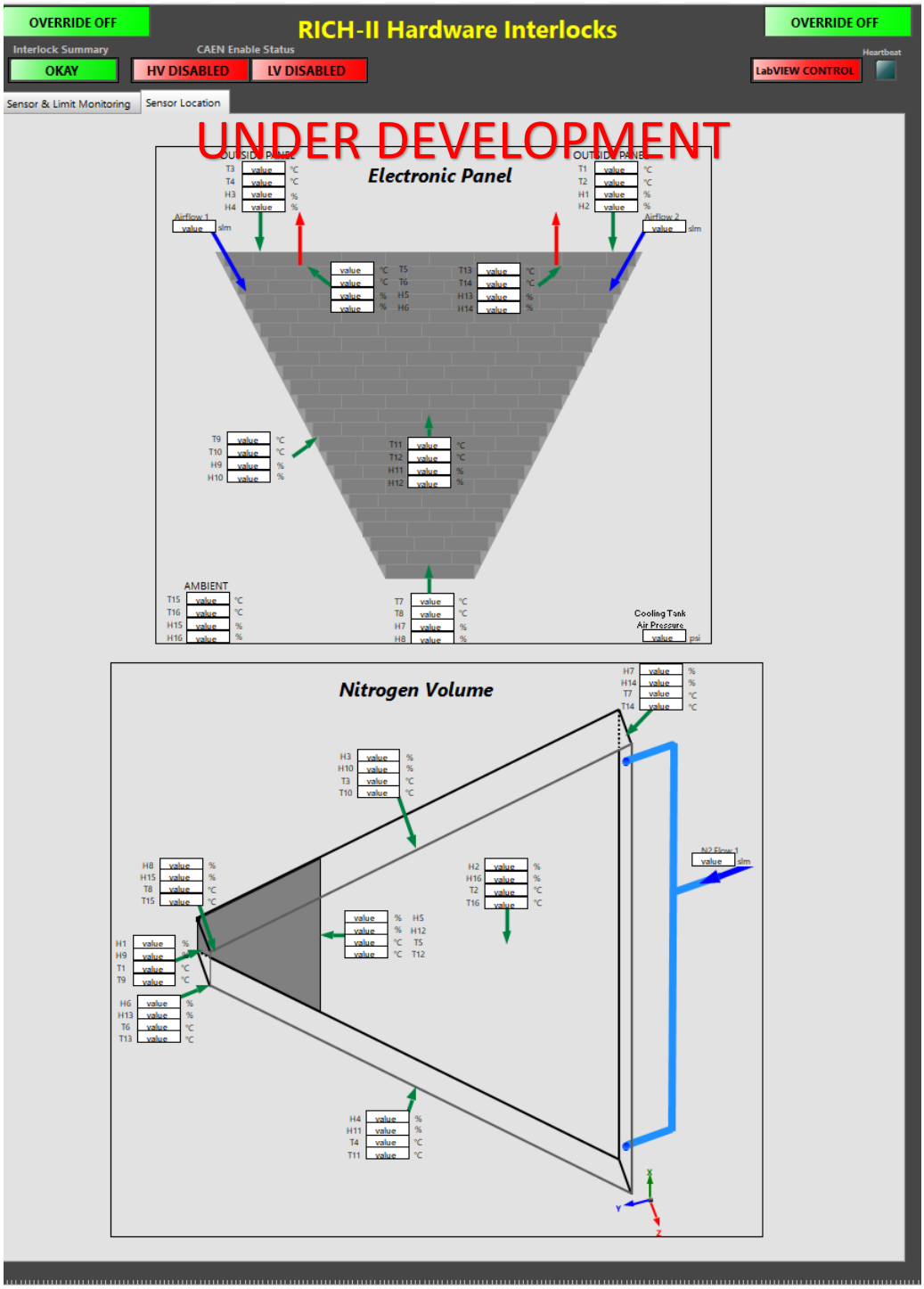
1. Mindy Leffel is assembling chassis; chassis is 90% complete
   - RMC/backplane PCB power connectors and RMC-to-backplane ribbon cables remain
2. Pins initially ordered for the RMC and backplane PCB connectors were incorrect; correct pins ordered and expected by end of the week

3. RICH hardware interlocks CSS screens

1. Screens based on those from first RICH sector, but modified to display information based on SHT35 sensor grouping
2. User-level and expert CSS screens under development for hardware interlock system
   - User screen
     - Sensor data in list view and in graphical format
     - Read-only for interlock limits, interlock enable
     - Only control is reset interlocks and a button to open expert screen
   - Expert screen
     - Sensor data in list view with controls for enabling interlocks and setting interlock limits
     - Additional tabs on screen for I^2C communication information and controls, averaging and interlock trip delay control, and system monitoring for sbRIO status information



Screenshot of list-view tab of user screen in CSS editor



Screenshot of sensor location graphical view of tab of user screen in CSS editor. Sensor locations displayed on screenshot are for first RICH sector and will be updated for RICH-II.