DSG-GEM R&D Meeting Minutes

Date: December 7, 2020
Time: 11:00 – 12:00

Attendees: Pete Bonneau, Aaron Brown, Pablo Campero, George Jacobs, Tyler Lemon, Marc McMullen, and Amrit Yegneswaran

1. Tyler Lemon completed modifications for the operational Gas Flow Sensor chassis; DSG will review the drawings this week

2. Cardinal Machine continues to have issues with new CNC software; they will e-mail when they send the first two exhaust Gas Flow Sensor and Multiplexer board enclosures to Jlab

3. Marc McMullen set up the prototype Gas Flow Sensor chassis in the DSG lab in EEL and verified its operation through remote monitoring via the EEL 86 subnet using a Raspberry Pi (Fig. 1)
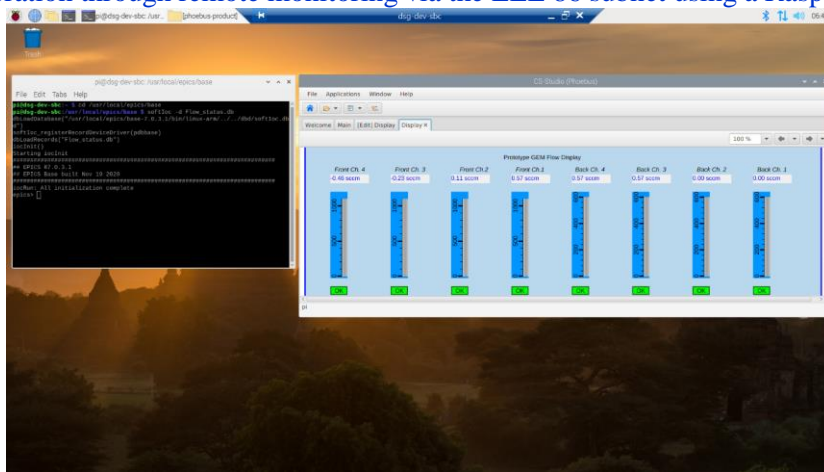

Figure 1. A remote monitoring screen of the DSG developed EPICS soft IOC and prototype GEM Flow Display software running in the DSG lab on a Raspberry Pi; there is no gas connected to the chassis

   3.1. Marc McMullen and George Jacobs will complete the turnover of the prototype GEM Gas Distribution System to the Hall A GEM group this week
      3.1.1. Marc McMullen will request from the computer center a hostname to be registered to the 36 subnet in TEDF to connect a Raspberry Pi with the pre-installed prototype Gas Flow Readback software
      3.1.2. George Jacobs will install the prototype Gas Flow Sensor chassis and the Regulator and Flow Meter Valve panels in the rack and connect the eight gas lines from the Flow Meter Valve panel to the input connection on the back panel of the Gas Flow Sensor panel
      3.1.3. George Jacobs will leave ¼" gas line at the rack for the Hall A group to connect the GEM detector to the gas line channels on the output of the Gas Flow Sensor chassis
      3.1.4. Marc McMullen requested notification of the rack's relocation to TEDF, so he can then make arrangements to connect the Raspberry Pi to the system and confirm remote monitoring via the 36 subnet
   3.2. The prototype Gas Flow Sensor chassis will be tested with the a "back" GEM module in TEDF; the GEM module is scheduled to be moved to TEDF on 12/9

4. Marc McMullen presented a talk on the labeling of the gas lines and Gas flow Sensor chassis; talk included a pictorial diagram of how the GEM Gas Distribution system for the BigBite spectrometer is connected from the Flow Meter Valve panel to the Gas Flow Sensor chassis
   4.1. The talk has been published on the DSG website
      GEM Gas Distribution System Labeling Scheme