

## DSG-GEM R&D Meeting Minutes

**Date: November 2, 2020**

**Time: 11:00 – 12:00**

*Attendees: Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Tyler Lemon, Marc McMullen, and Amrit Yegneswaran*

1. Brian Eng informed the group that the GE<sub>n</sub> experiment readiness review write-up has been sent to Physics management for review
2. DSG is reviewing the prototype Gas Flow Sensor chassis
  - 2.1. Marc McMullen will select a cable management component for installation, which will potentially move the flow sensors toward the front panel on the final design
  - 2.2. Marc McMullen will take photographs of the profile view of the chassis so the group can evaluate the interior space for gas tubing
  - 2.3. DSG will list changes for Tyler Lemon to add to the final chassis design
3. Marc McMullen has sent six plastic enclosures to a local shop to be machined into exhaust Gas Flow Sensor and Multiplexer chassis; one sample of each type will be machined and evaluated for fit
4. DSG discussed the mounting position of the GEM gas distribution components rack for both the Super BigBite and BigBite supply systems
  - 4.1. George Jacobs suggested repositioning the Gas Flow Sensor chassis to increase space between the flow meter valves panel and manifold panel and the Gas Flow Sensor chassis
  - 4.2. George Jacobs suggested that the service loop for the ¼” gas lines that will be connected to the input of the Gas Flow Sensor chassis be placed on top of the chassis
  - 4.3. George Jacobs and Amrit Yegneswaran suggested that prototype components be installed in the racks with real gas lines to find best component positioning in the rack
5. Software development continues
  - 5.1. Marc McMullen has successfully installed a soft IOC on the Raspberry Pi to produce the process variables for the prototype, eight-channel, flow readback program
  - 5.2. Marc McMullen has successfully installed CSS Phoebus on the Raspberry Pi and is working on a local flow display for the prototype system
  - 5.3. The prototype flow data will be archived using MYA once installed at JLab; the data will be available for remote monitoring

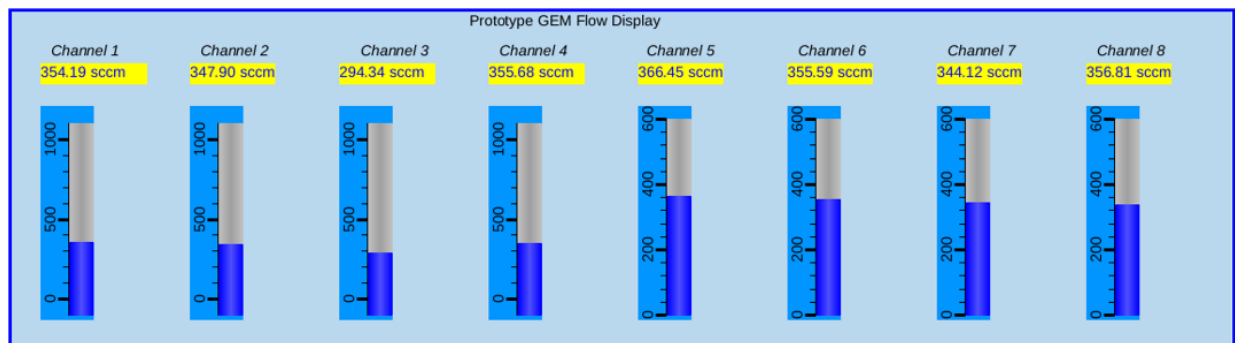


Figure 1. Prototype flow display written in CSS Phoebus with values populated from the soft IOC

6. George Jacobs has completed assembly of the prototype regulator and flow meter valve panels
  - 6.1. The panels were given to Hall A for leak testing

7. DSG discussed the regulator panel relief valve rating to ensure the protection of the system components downstream of the relief valve
  - 7.1. Marc McMullen will make a single line diagram of the prototype setup, which will be discussed during the next meeting