DSG-GEM R&D Meeting Minutes

Date: December 14, 2020
Time: 11:00 – 12:00

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

1. DSG completed development and assembly of the prototype GEM gas distribution system for the Hall A Super BigBite/BigBite spectrometers on December 11, 2020
    1.1. The Regulator panel was assembled, mounted to the rack, and connected with ¼" nylon tubing to the Flow Meter Valve panel by George Jacobs
    1.2. The Flow Meter Valve panel was assembled, mounted to the rack, and connected to the Gas Flow Meter chassis by George Jacobs
    1.3. Prior to being mounted in the rack, the Gas Flow Sensor chassis was connected to a Raspberry Pi that was preloaded with prototype gas flow readback software and tested by Marc McMullen
    1.4. The gas flow readback software was remotely monitored by Marc McMullen for four days to ensure the viability of remote monitoring
    1.5. The Super BigBite/BigBite group was informed by Marc McMullen that the prototype GEM gas distribution system rack is ready to be relocated to the GEM test setup in TEDF
    1.6. The prototype GEM gas distribution system will be moved to the test location in TEDF and connected to a single UVA GEM layer, where it will supply $ArCO_2$ for four channels at a flowrate ≤ 500 sccm
    1.7. Marc McMullen will connect the Raspberry Pi based monitoring system and start the program after the move
    1.8. DSG will provide remote support to ensure the readback software is working properly

2. DSG review of the production version of the Gas Flow Sensor chassis design drawings for the Super BigBite/BigBite gas distribution systems was completed
    2.1. Tyler Lemon removed the silk screen numbering from the drawings, making the design flexible for use on any gas distribution circuit for the GEM detector systems
    2.2. Amrit Yegneswaran advised Marc McMullen to move forward with the procurement of remaining Gas Flow Sensor chassis; Marc McMullen contacted Procurement to start the order