Hall A GEM Gas Distribution Meeting

Date: October 27, 2020
Time: 09:30 – 10:30

Attendees: Peter Bonneau, Aaron Brown, Pablo Campero, George Jacobs, Tyler Lemon, Marc McMullen, Brad Sawatzky, and Jack Segal

1. Marc McMullen gave an update on the procurement status
    - 1.1. All components procured to build the prototype system have been delivered
    - 1.2. Six project boxes for the prototype exhaust system have been delivered and are being sent for machining
    - 1.3. I^2C pressure transducers have been received

2. Marc McMullen gave a presentation on assembly of the prototype Gas Flow Sensor chassis
    - 2.1. Prototype GFS chassis development
    - 2.2. The system is still on track for delivery to EEL 125 by mid-December

3. George Jacobs showed photographs and presented details of the prototype regulator and rotameter panels

4. Marc McMullen gave an update on progress of software development
    - 4.1. Marc McMullen developed an eight-channel flow readback code in Python
        - 4.1.1. The channel readout delay is set to one second during development (approximately eight seconds to read all channels)
    - 4.2. EPICS has been installed on the Raspberry Pi and a sample IOC has been tested
        - 4.2.1. Marc McMullen is modifying the sample IOC to provide process variables for eight channels of flow readout
    - 4.3. Brian Eng is working on software that will recognize a connected flow sensor, which will aid in solving issues with problematic channels on the I^2C bus
    - 4.4. Pressure transducer readback code will start in November

5. Marc McMullen requested documentation for the new front GEM layer design
    - 5.1. Brad Sawatzky confirmed that gas supply to new design will be same as current INFN design
        - 5.1.1. The new design uses a single GEM, which has the same form factor and has roughly the volume as INFN's triple GEM layer design
    - 5.2. Brad Sawatzky noted that Kondo Gnanvo and Robin Wines may have documentation on the new front GEM layer design; Marc McMullen will request available documentation