

## Hall A GEM Gas Distribution Meeting

**Date: January 05, 2021**

**Time: 03:45 – 04:45**

*Attendees: Peter Bonneau, Aaron Brown, Brian Eng, George Jacobs, Tyler Lemon, Marc McMullen, Anuruddha Rathnayake, Jack Segal, and Ezekiel Wertz*

1. DSG delivered prototype regulator and flow meter panels to the GEM group on 10/30/2020; recommended leak check
  - 1.1. GEM group connected the prototype system to nitrogen on 12/22/20
  - 1.2. System was pressurized to 8 psi at the panel regulator; manual flow meter valves were set to 75 sccm
  - 1.3. Leak detected at input to regulator panel; nylon tubing could be pulled out of push-lock fittings. GEM group replaced nylon tubing with polyethylene to improve retainment of tubes and reduce leaks
  - 1.4. Despite tubing replacement, nitrogen bottle depleted faster than expected, the GEM group connected nitrogen to a different manifold which supplied four channels to the DSG designed Flow Meter panel to supply 75 sccm to the four inputs of the GEM layer

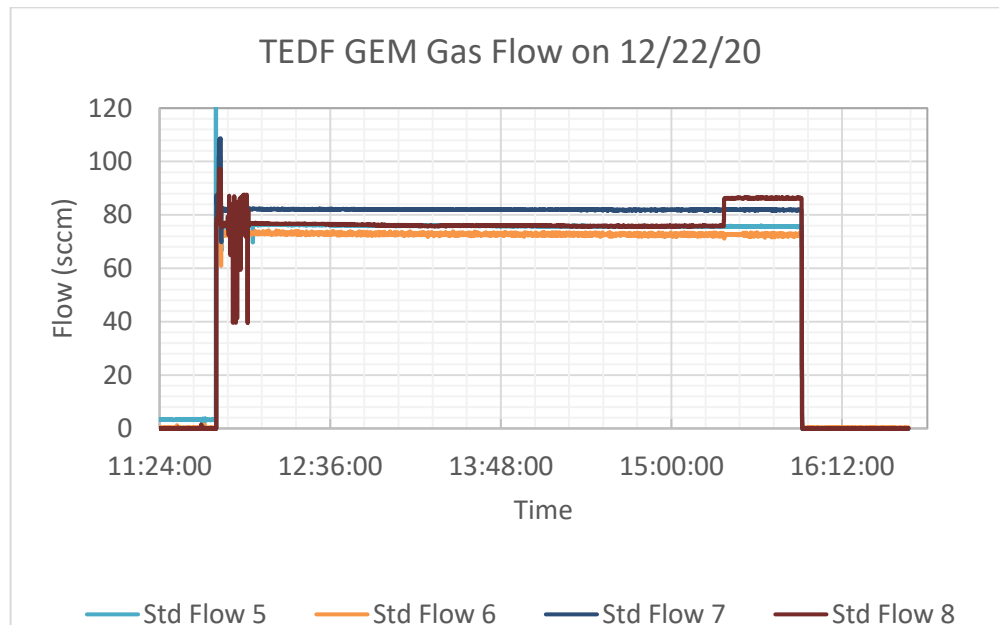


FIG. 1. Initial gas flow test of GEM gas distribution and flow readback

2. Standard flow to UVA GEM detectors is expected to be 225 sccm; manual flow meter valve range is 50–500 sccm
3. During operations, Ar/CO<sub>2</sub> will flow at 225 sccm for UVA GEM layers; nitrogen purge could use same rate
4. Marc McMullen monitored nitrogen flow using remote desktop protocol, with data logging to a flash drive (Fig. 1); DSG will develop WEDM screens to allow simultaneous remote monitoring