DSG-GEM R&D Meeting Minutes

**Date: October 19, 2020**
Time: 11:00 – 12:00

Attendees: *Mary Ann Antonioli, Peter Bonneau, Aaron Brown, Pablo Campero, Brian Eng, George Jacobs, Marc McMullen, Amrit Yegneswaran*

1. All components for the gas flow distribution system are in-house

GEM Prototype Gas Distribution System		
Parts	Needed for prototype	In-hand
Gas Flow Sensor/Multiplexer Chassis		
chassis	1	Y
400-sccm sensor board	4	Y
750-sccm sensor board	4	Y
multiplexer	1	Y
1/4" gas line	10'	Y
push-lock connections	16	Y
panel mount RJ-11 Connectors	2	Y
4-conductor cable	10'	Y
6p4c connectors	20	Y
standoffs	36	Y
Regulator Panel		
2U panel	1	Y
0–15 psi regulator	1	Y
I^2C pressure transducer	2	Y
4-channel manifold	2	Y
orifice	1	Y
relief valve	1	Y
Flow Meter Panel		
2U panel	1	Y
100–1000 sccm rotameters	4	Y
50–500 sccm rotameters	4	Y
Data Acquisition		
Raspberry Pi 4 kit	1	Y
level shifter	1	Y

2. Marc started assembly of the prototype gas flow sensor chassis, shown below
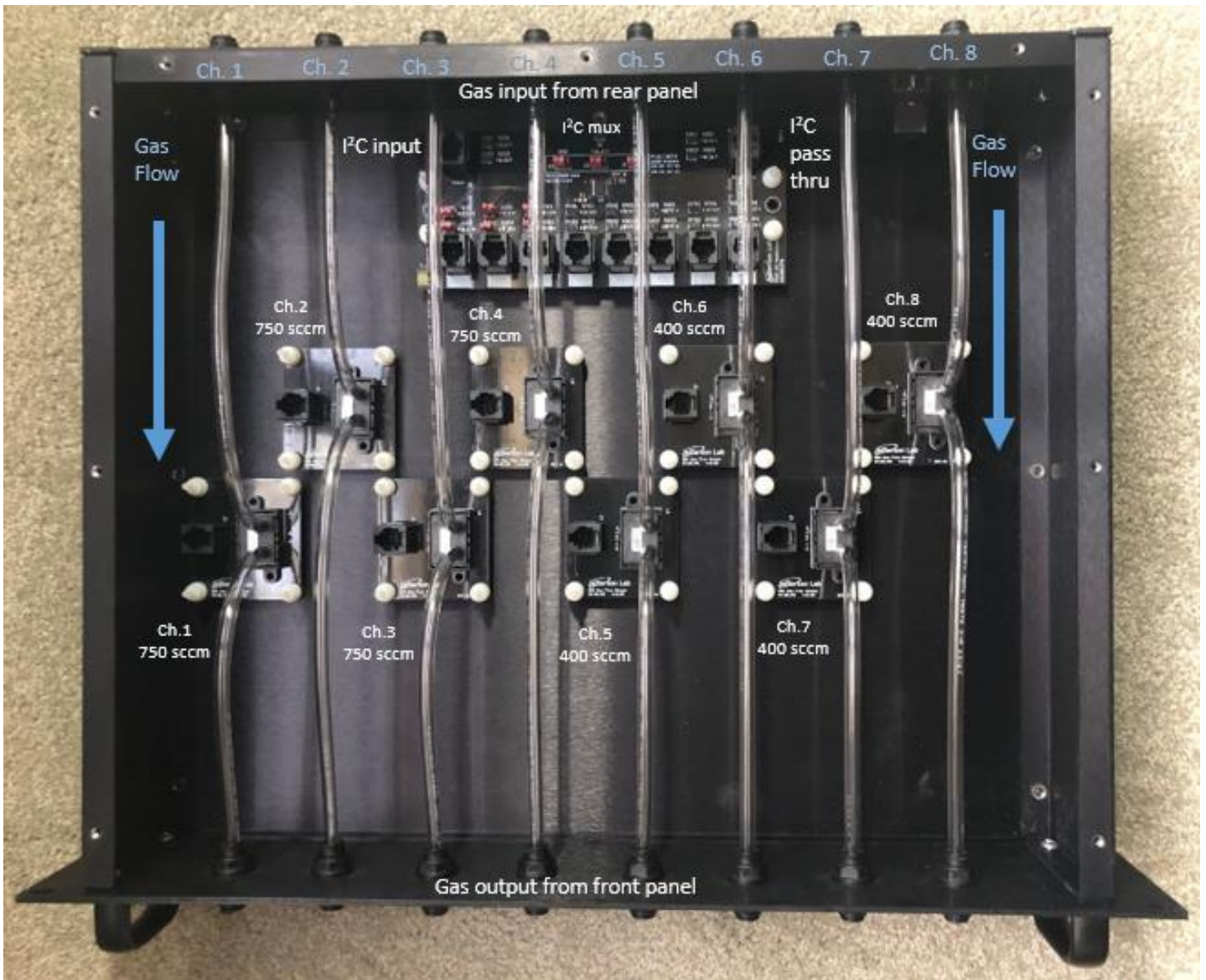
3. Tyler provided fabrication drawings for the exhaust flow sensor board and multiplexer boxes
    3.1. Marc has sent the multiplexer fabrication drawings to a local shop for quote
4. Software development is underway
    4.1. Marc has written Python code to cycle through mux channel and read back flow from the Honeywell Zephyr
    4.2. Brian has written Python code that sequences multiplexer channel switching between multiple multiplexer boards