

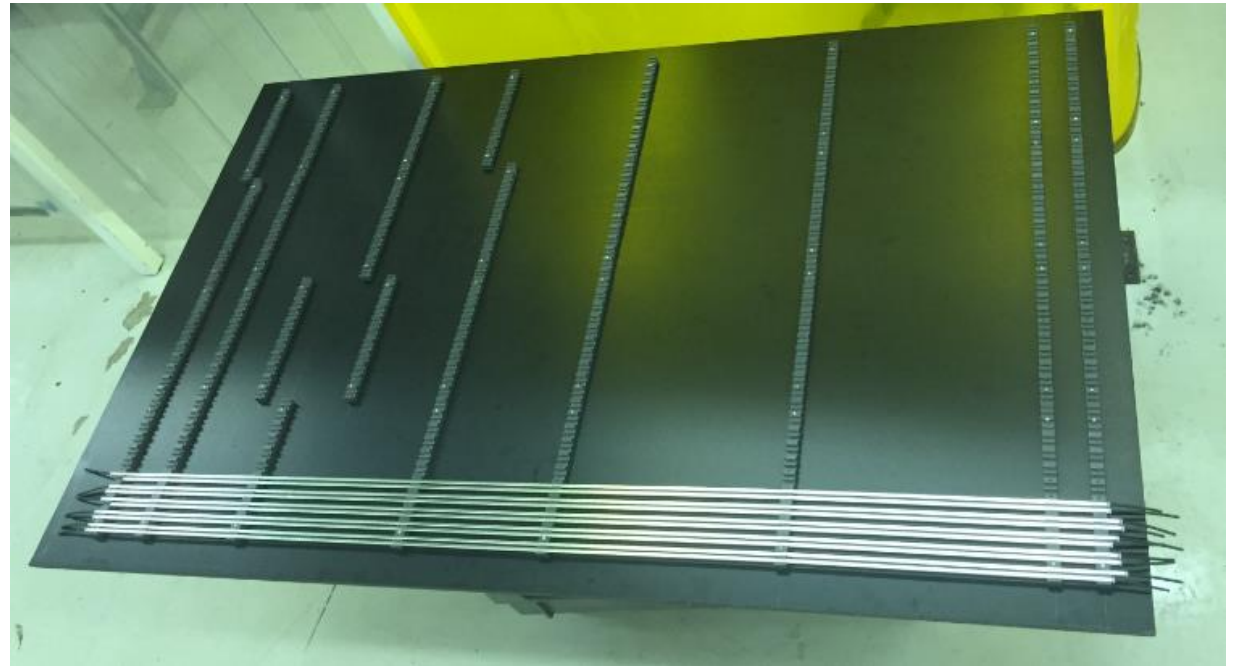
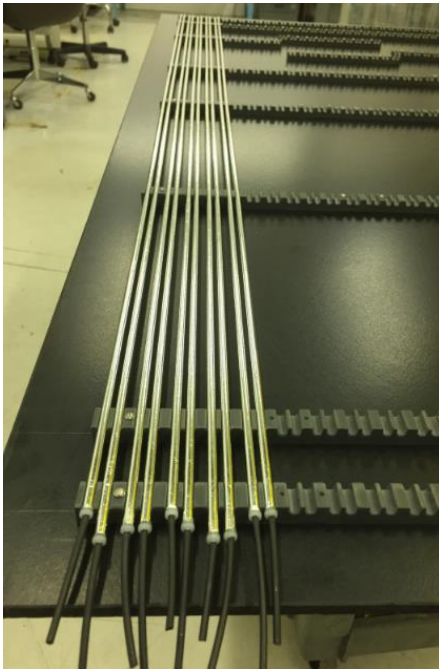
Fermilab Update

Dan Ambrose

8/21/15

Laser cutting apparatus

- Complete and ready for initial tests
- Try 10 straws, Cut, then measure, then repeat.



Repeat Injection Test

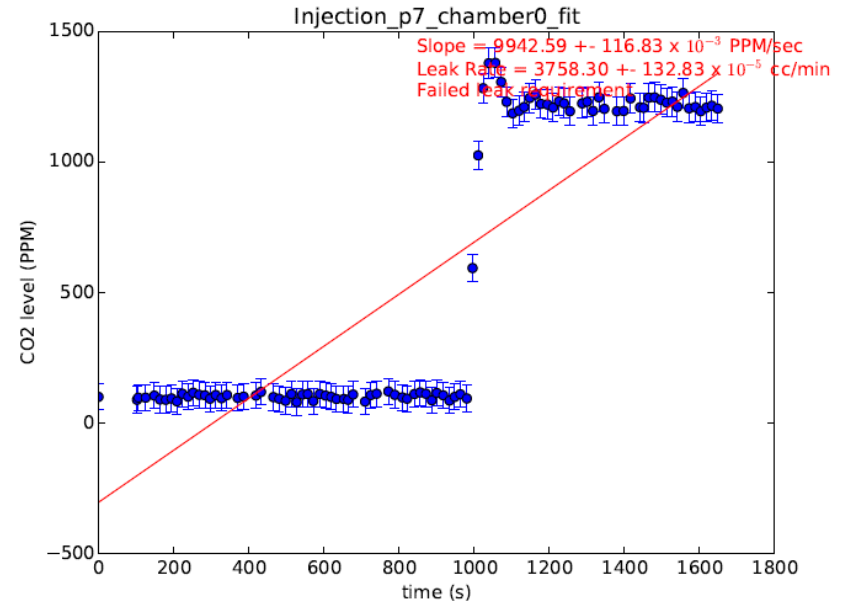
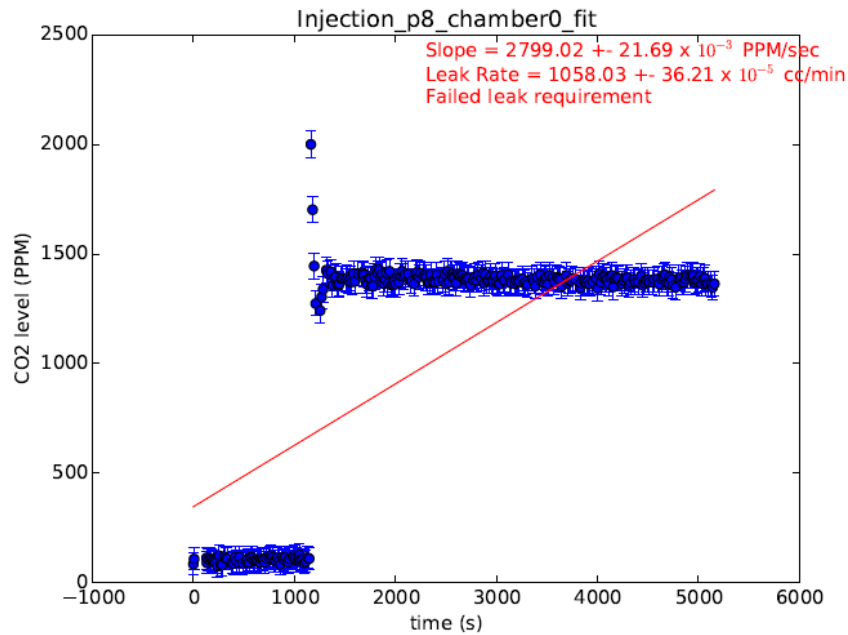
Chamber	Geometric 4/15	Tygon Tube 4/15	Injection Argon/CO2 5/15	Injection pure CO2 7/15	Water + box measurement 8/12	Injection Pure CO2 8/15
0	572 ± 35	569 ± 28	595 ± 18	630 ± 21	575 ± 14	631±10
1	572 ± 35	582 ± 15	617 ± 24	629 ± 18	585 ± 14	630±11
2	544 ± 35	555 ± 19	604 ± 16	632 ± 18	560 ± 14	621±11
3	549 ± 35	494 ± 5	530 ± 16	544 ± 15	550 ± 14	537±9
4	554 ± 35	481 ± 20	544 ± 15	552 ± 15	555 ± 14	553±9

Hypothesis was that CO₂ might leak from stored tubes. Thus the amount of CO₂ injected into first couple chambers was less than we thought, explaining why 0,1,2 are high but 3,4 match geometric.

This time we let the CO₂ run for 3 minutes before injecting (10x time to clear piping from cylinder to syringe). We also injected in reverse order than usual. Started 4 and went down to 0.

No Difference Found.

Oscillation mystery



Worst case with 90 seconds transition time.
Most injections have 0 or 1 point with off equilibrium.

