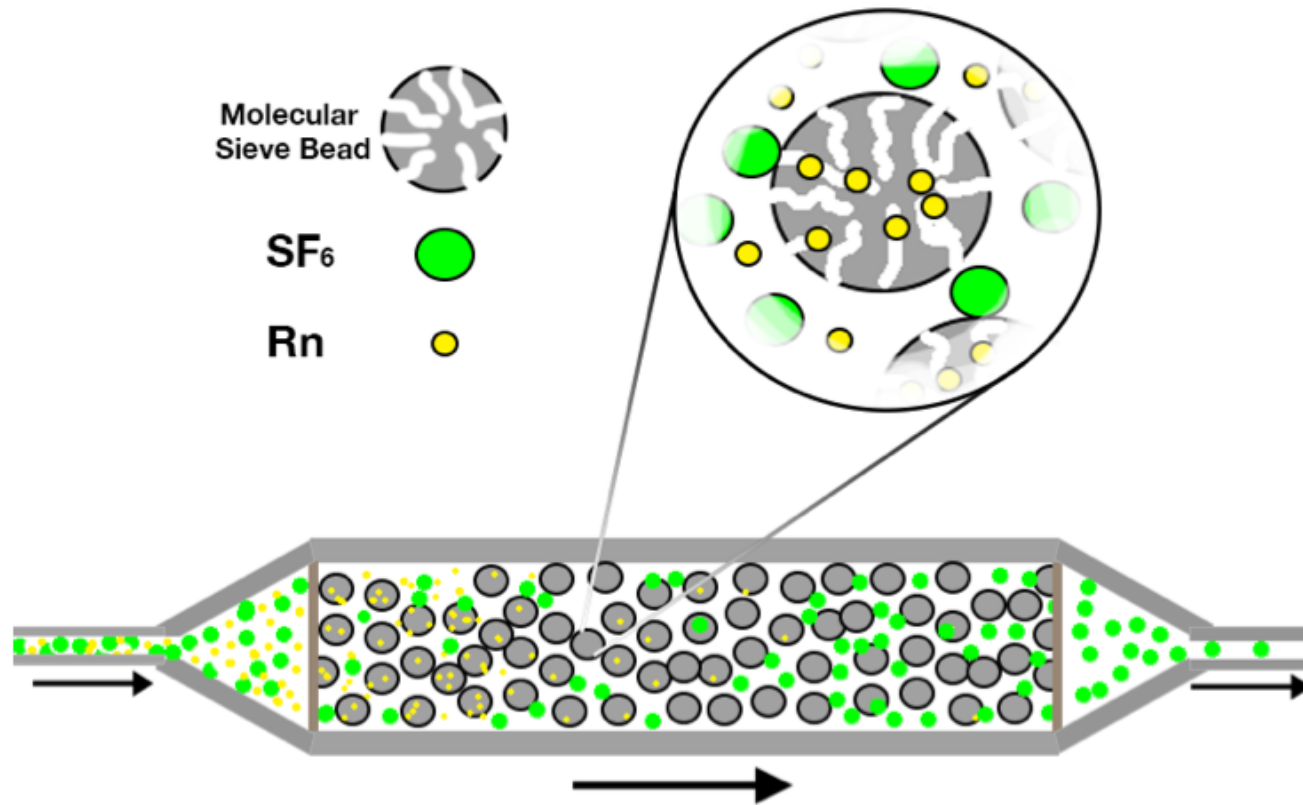


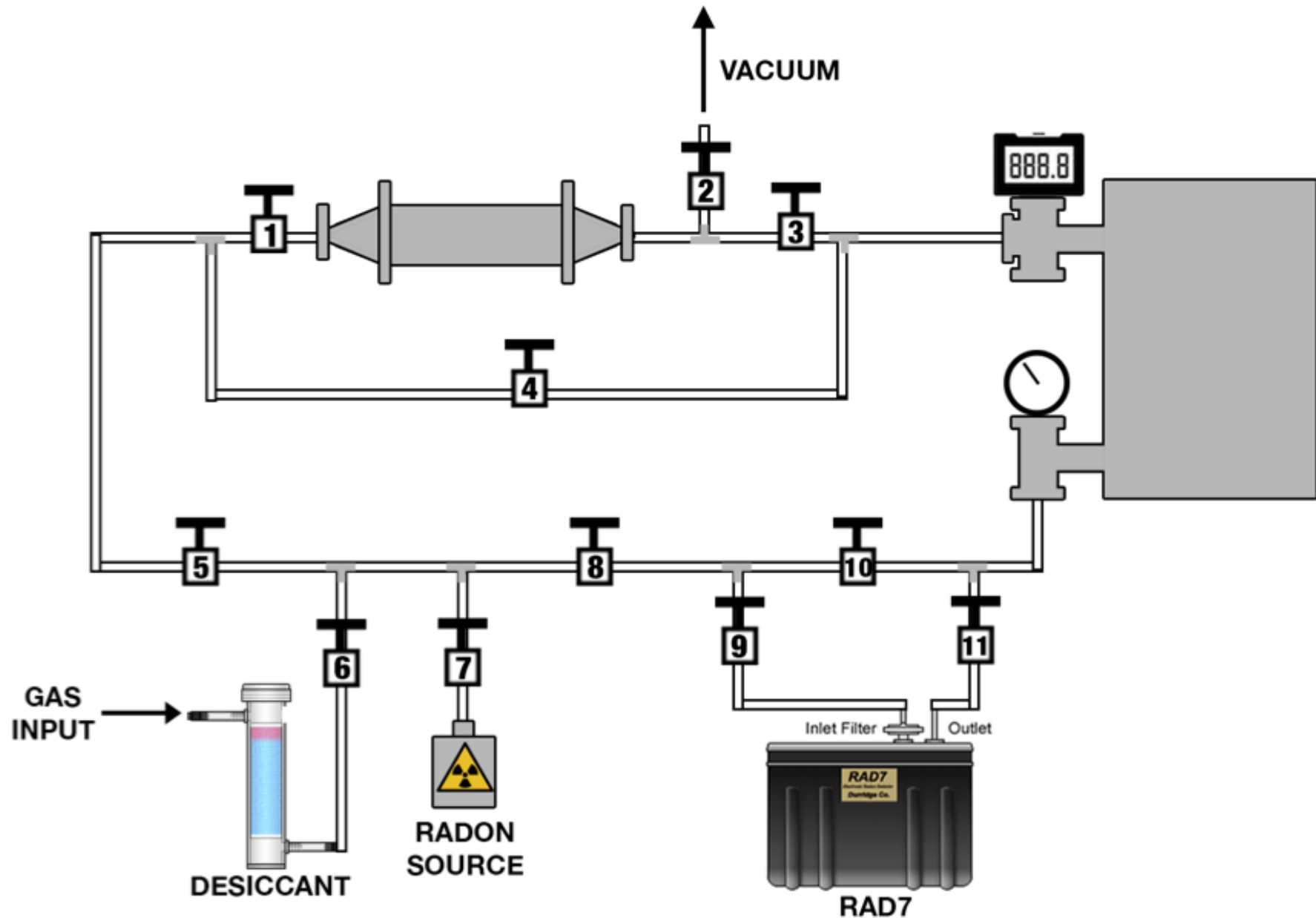
Active removal of Rn from SF₆

work by Rob Gregorio, James McKeand

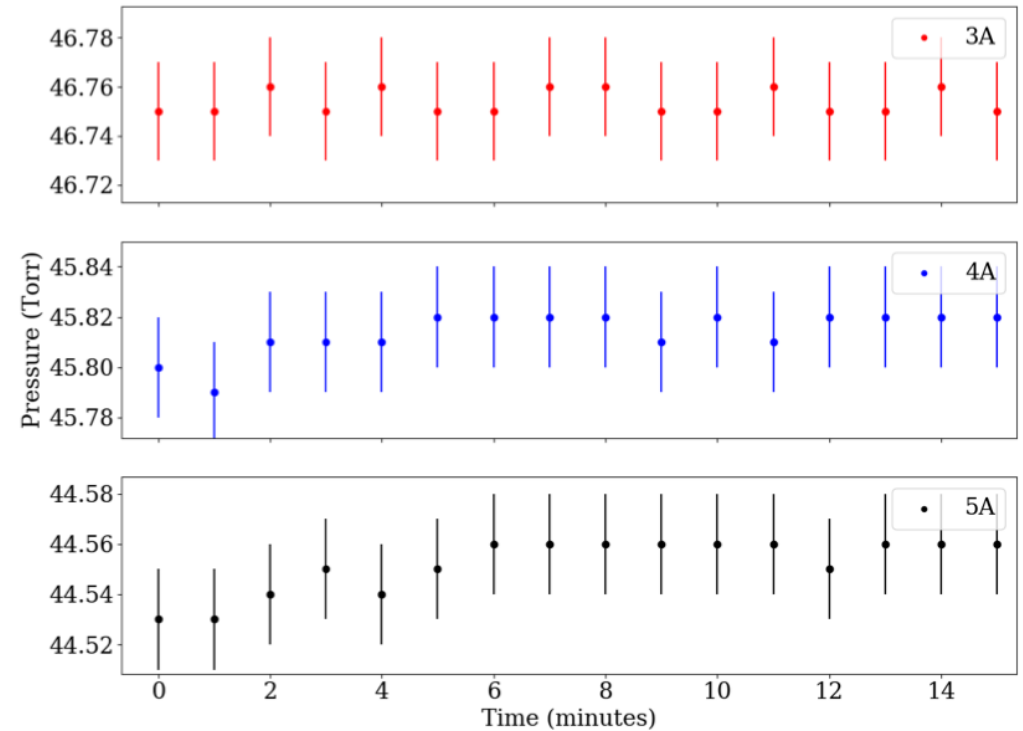
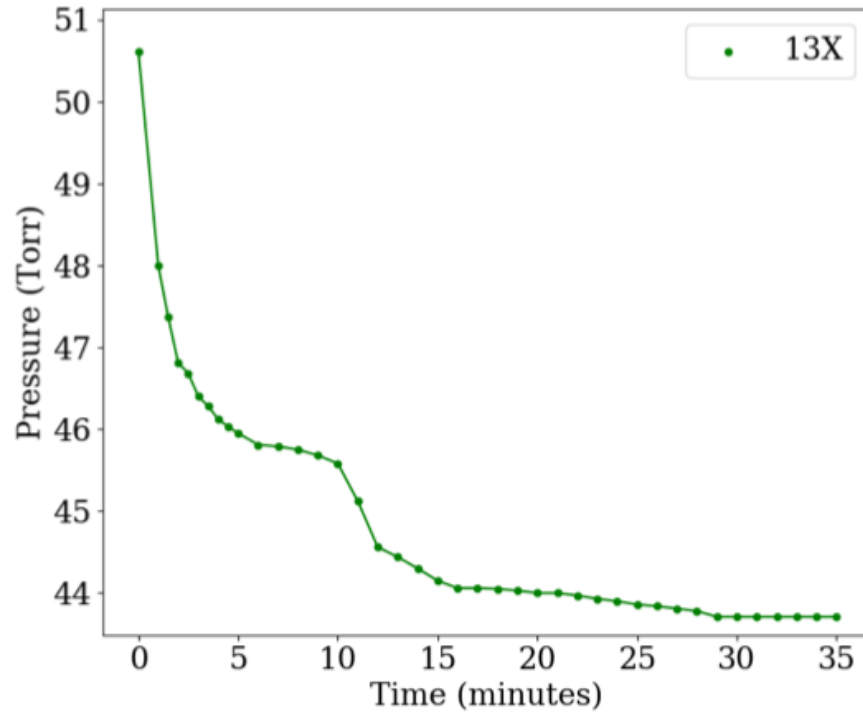


Molecular Sieve	Molecular Formula	Pore Size (Angstroms)	Approx. Bead Size (mm)
3A	$0.6K_2O \cdot 0.4Na_2O \cdot Al_2O_3$	3	2
4A	$Na_2O \cdot Al_2O_3 \cdot 2.0SiO_2$	4	2
5A	$0.80CaO \cdot 0.20Na_2O \cdot Al_2O_3 \cdot SiO_2$	5	4
13X	$Na_2O \cdot Al_2O_3 \cdot 2.8SiO_2$	10	4

Active removal of Rn from SF₆

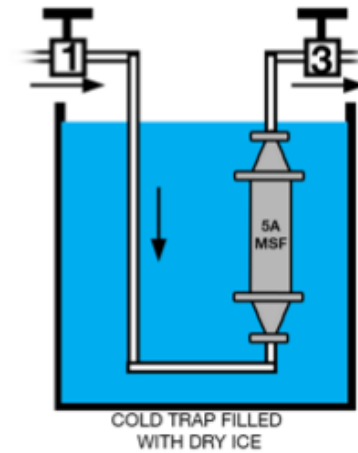
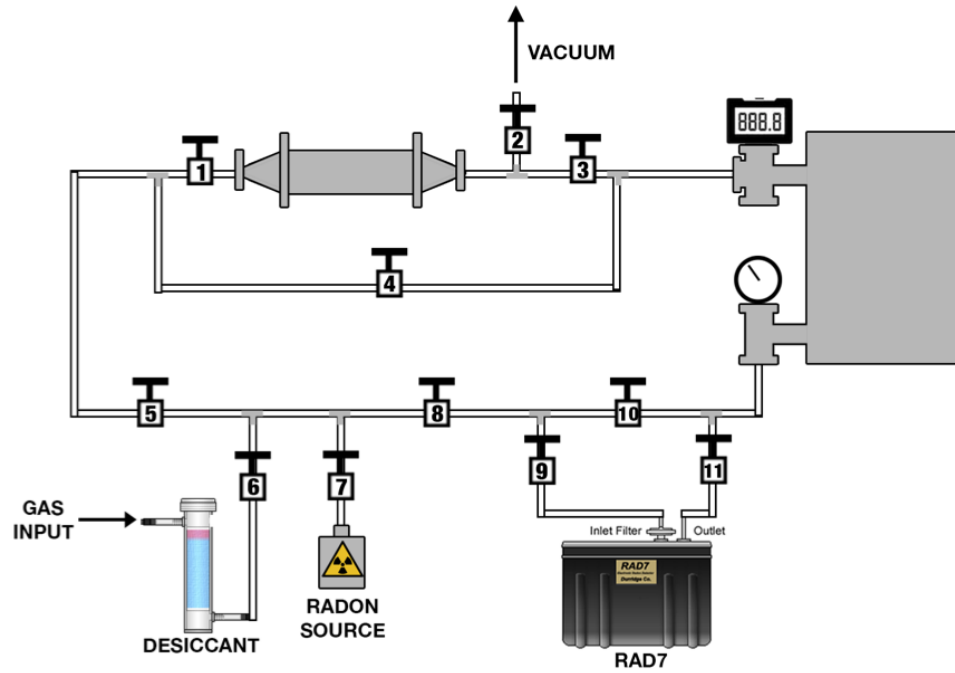


SF₆ Recirculation Results

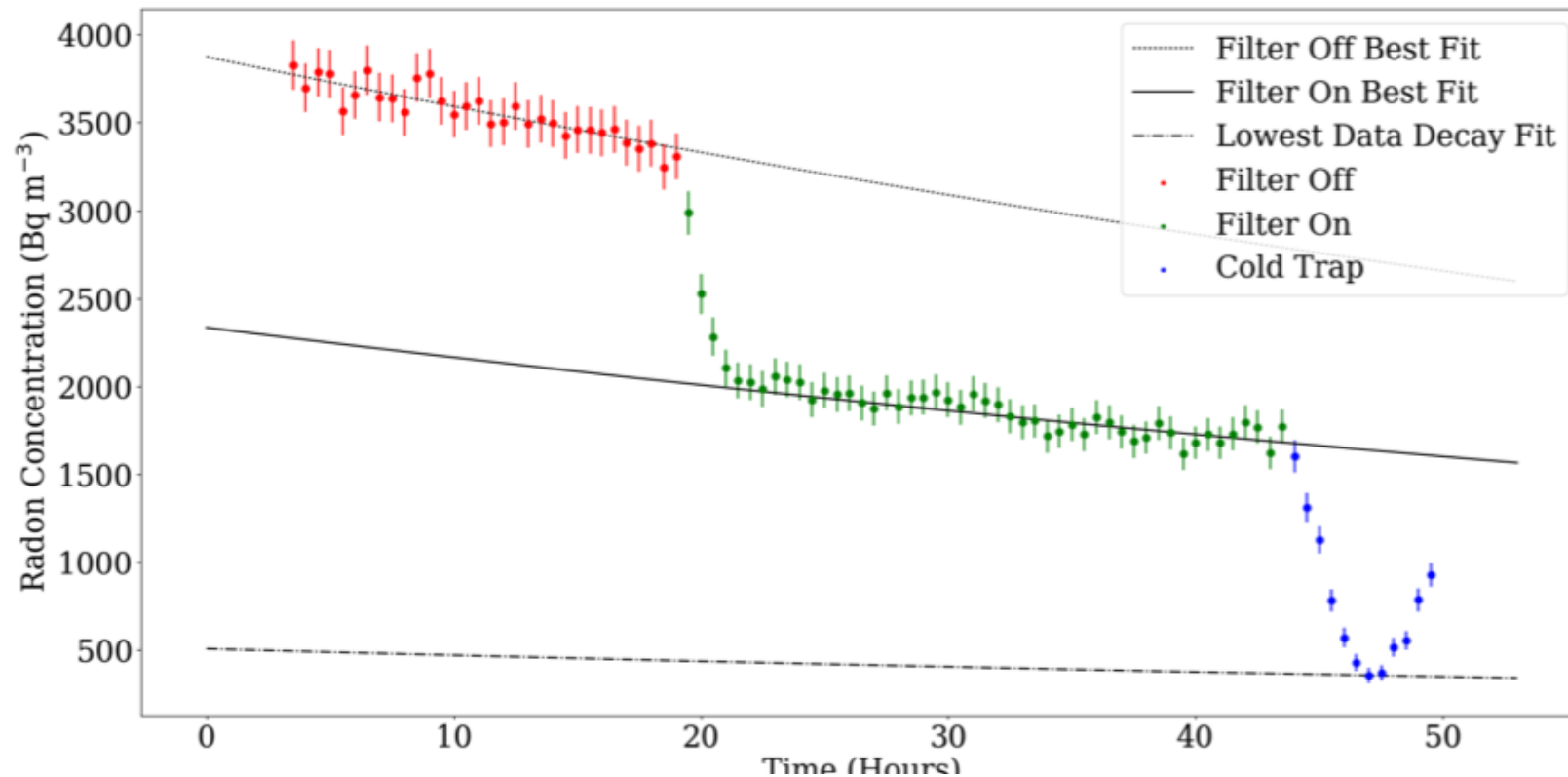


Conclusion: use 3A, 4A, 5A ok - no absorption

SF₆ + Rn Test Results with Cooling



SF₆ + Rn Test Results with Cooling



Data	Extrapolated N_0 (Bq m ⁻³)	Total Radon Concentration Reduction
Filter Off	3874.8 ± 13.1	-
Filter On	2356.9 ± 10.0	40%
Cold Trap Lowest	504.6	87%

Conclusion: relatively simple recirculation can remove Rn from SF₆ without absorbing SF₆