1. Regulators must be set to less than 724 kPa (7.24 bar, 105 psi) to V₁₋₁₄: Pneumadyne S15MML-20-12-2B: 2WNC R_i: Regulator LM51-6-L-200-10-O-M-M-O-A-B-Inert, 200 / 10 bar, protect valves V₁₅: KIP 351078-0101-12VDC 3WDC set < 7 bar (NOX) 2. Do not start pump against load V₁₆: KIP D351061-0101-12VDC 3WMP buffer: PVC pipe, schedule 40, 8" OD, 1 m length 3. Do not block pump exhaust, otherwise maximum working pressure V_{19} : 1/4" Swagelok needle valve TBD cx₁: 1/4" Swagelok bulkhead union SS-400-61 could be exceeded P1: KNF N838KNDCB12V diaphragm pump cx2: Swagelok 1/2" - 1/4" reducing union SS-810-6-4 P2: KNF NMP 09 B 6V diaphragm pump cx3: 1/4" Swagelok - 1/4" NPT male connector SS-400-1-4 F₁: Pall 60230 Zefluor, 3 µm 50 mm filter, Savillex 410-10-47, tubing: Synflex 1/4" nominal 414-47, 411-21-47, 412-10-47 filter holder assembly S₁: LI-COR CO2 scrub tube F2: Pall R2PJ047 Teflo 2 µm 47 mm filter, Pall 1119 inline filter S2: LI-COR H2O scrub tube holder B₁: Pelican 1780NF Transport Case MFC₁: MKS M100B, 200 sccm B2: Calibration gas box TBD MFC2: MKS 1579A00851LS1BV, 50 slm B₃: Buffer box TBD B₄: Pump box TBD MFC3: MKS GE50A008503S5V010, 5 slm T₁: 1/4" Swagelok union tee SS-400-3 B_1 LI-840 profile MFC₁ calibration manifold CX_3 $_{\rm cx_1}$ B_2 cal ~0.2 slm CX₁ CX₁ CX₁ CX₁ CX₁ CX₁ CX_1 CX₁ CX₁ LI-7000 cell B profile, ~1 slm cell A C₃ 350 C₂ 390 ppm cell B V_{10} V_{12} V_{13} V_{14} cell A profile inlet manifold eddy B ~14 slm CX_1 $cx_1 cx_1 cx_1 cx_1$ B_3 eddy inlet 6 mm - 20m 6 mm - 20m İΒ₄ F_1 F_1 F_1 F_1 F_1 F_1 F_1 15 slm exhaust cx_1 cx_1 cx_1 cx_1 $\Delta P = 2 \text{ kPa}$ TITLE Airflow schematic opt. buffer buffer 82 kPa 80 kPa FILE airflow.svg REVISION 0.7.0 DRAWN BY Alex Cobb PAGE 1 OF condensation trap condensation trap 2013-10-22