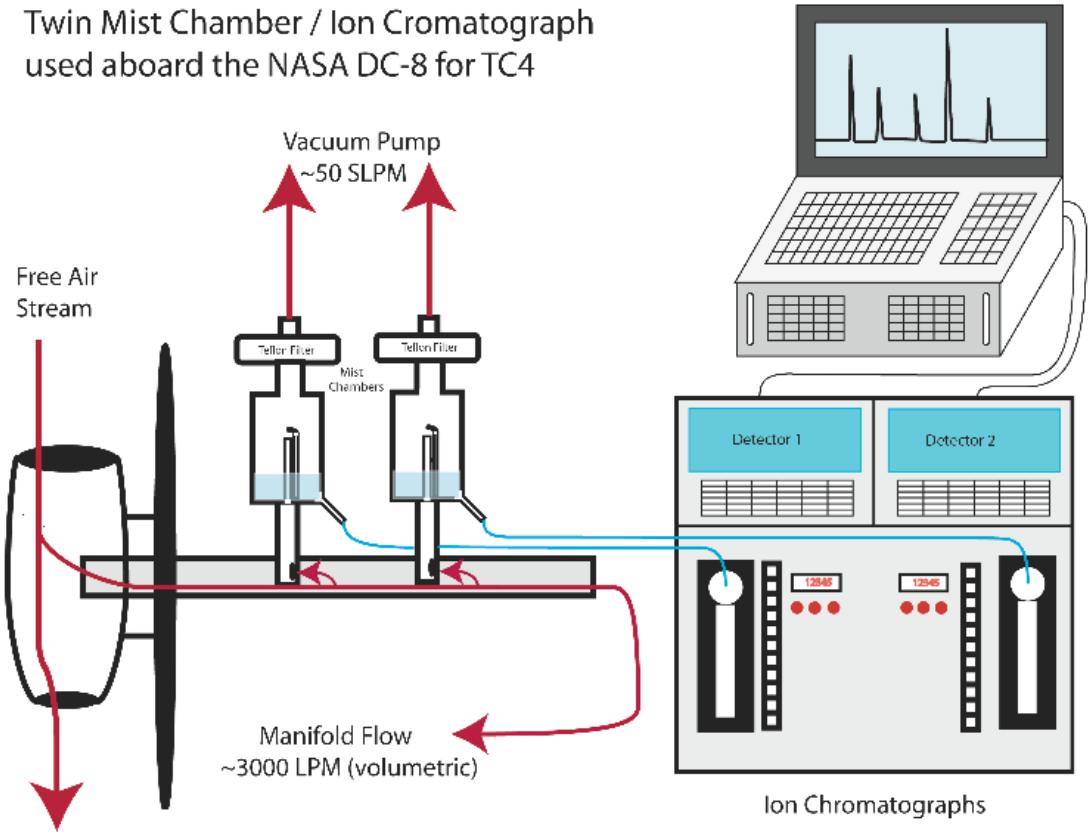

UNH SAGA

MC/IC system gives near real-time data at approx 90 second resolution.

We will report HNO_3, fine (< 1 micron) $SO_4^=$, and soluble Br^- (HBr, HOBr, particulate Br^-) from this system. Detection limits are near 1-2 ppt.

If present, sulfite and nitrite provide semi-quantitative measures of SO_2 and HONO (not routinely reported).

Bulk Aerosol samples collected on 2 different filters: $\leq$ 5 min integration time below 10 kft, $\leq$ 15 min at max altitude. One filter is used to quantify the radionuclide tracers ^{7}Be and ^{210}Pb. Other filter is extracted into water and ions (Cl^-, Br^-, NO_3^-, $SO_4^=$, $C_2O_4^=$, Na^+, NH_4^+, K^+, Mg^{2+} and Ca^{2+}) are quantified by IC. These analyses are conducted in our labs back at UNH.

UNH SAGA Operational Concerns

Aircraft must stay above freezing on the ground

Need ~ 2 hours preflight for IC's to warm up, will be longer if cabin is cold when starting

Venturi pumps for aerosol vacuum, the aerosol probes, and the high flow MC inlet all designed for DC-8 nominal cruising speeds, performance degrades if we have to slow too much (for intercomparisons, or to keep other inlets happy (like Al's and apparently maybe the NCAR HO_x system))

Need space to set up "wet" lab for filter processing (fridge and at least a drain) in addition to a separate data processing station. Last telecon (3 Jan) news that space may be limited in Fairbanks could be a problem

For any suitcase flights we need cold storage space on DC-8 to get filters from outbound flight back to the lab at deployment base

Also need to transport 2 each 10 liter jugs of ultrapure water to operate on return flight of suitcase missions