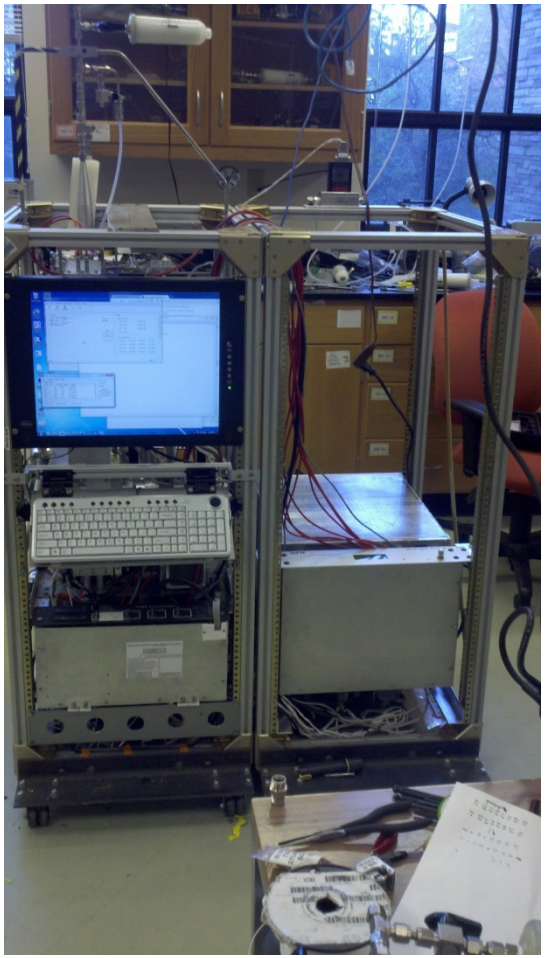
Configuration as flown on the DC8



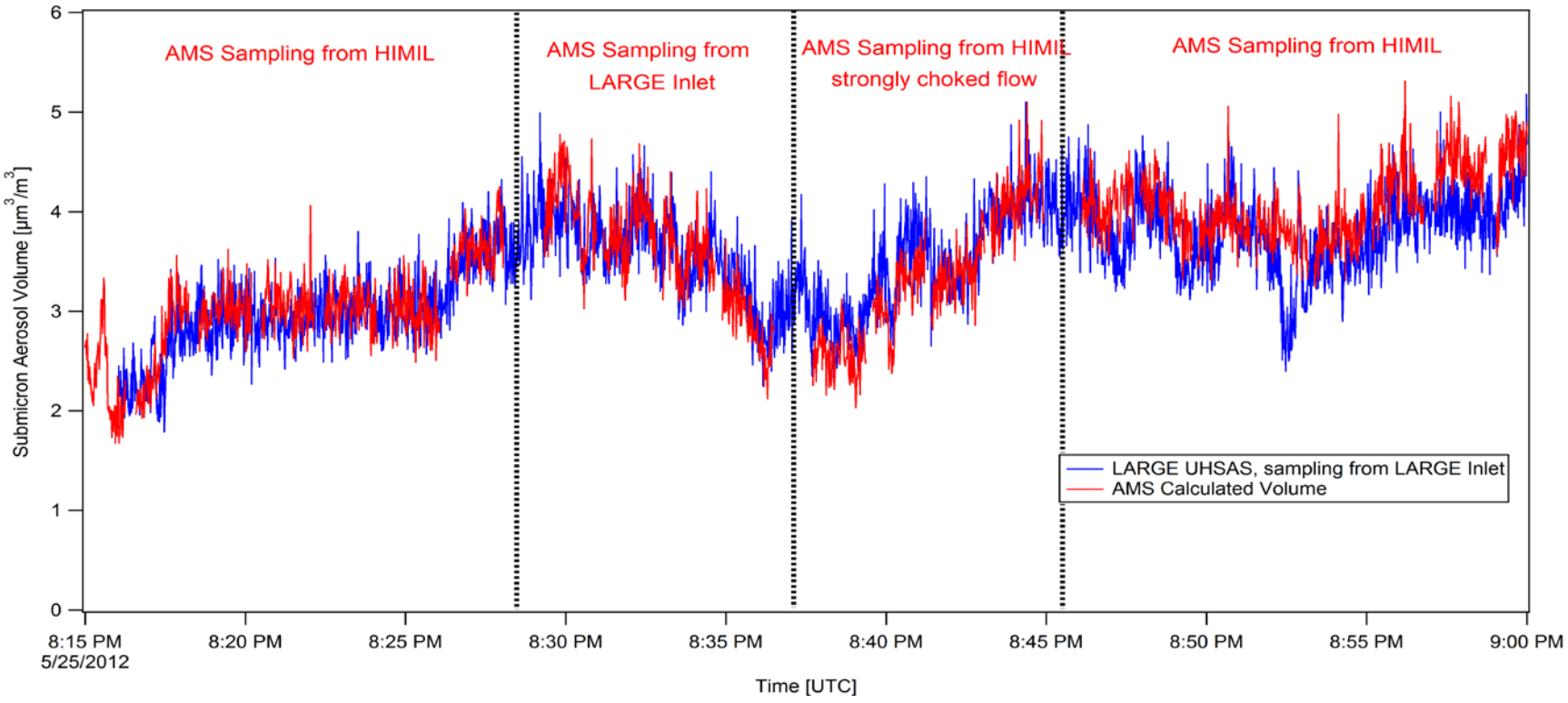
Additions:

- HTOF Mass analyzer, about 3x more resolution, 1.5-2x worse final detection limit
- Larger power supply to run the HTOF MS
- Cryopump to improve in-flight detection limits by reducing instrumental background after “cold start”
- Double converting UPS
- Improved pressure controlled inlet (installed after returning from Salina)

- New calibration cart for quick, routine calibrations on maintenance days
- New extra small foot-print, custom leak detector for in-field diagnostics

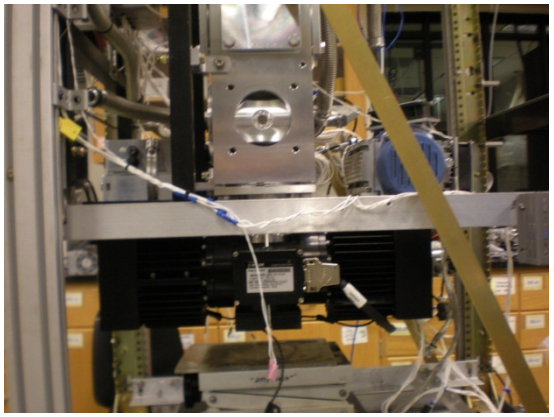
Comparison Tony Clarke/LARGE Inlet vs HIMIL with custom internal diffuser

Inlets were switched during one flight via manual valves for testing purposes



There are still some absolute calibration issues to be addressed, but inlet performance during DC3 seemed satisfactory

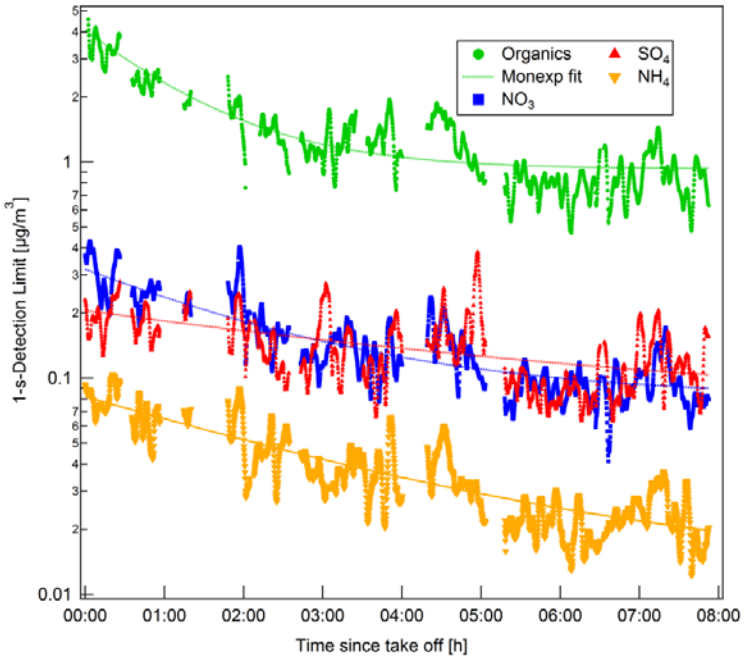
Improvements due to the new Cryopump



While “end of flight” DLs only improved slightly, it makes a huge difference during the first hours of the flight (up to 10x)

Flying it on the GV would require finding room for the MS power supply outside the AMS rack. This might be an option for lighter payloads

Detection Limits, ARCTAS-B, RF11



Detection Limits, DC3 (w/cryopump), RF17