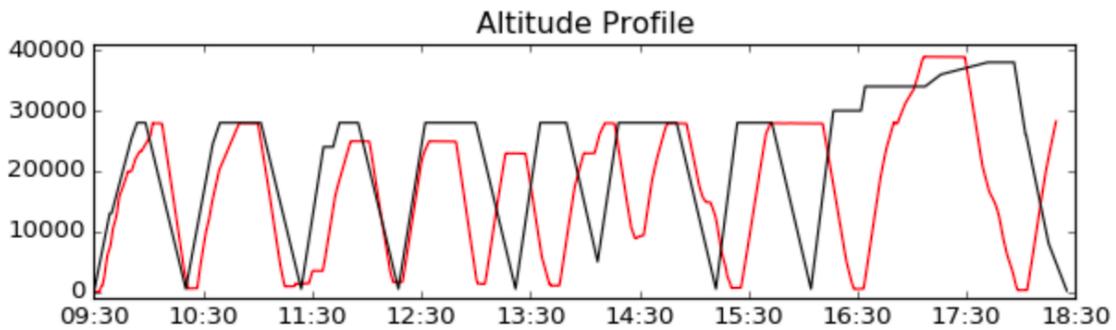
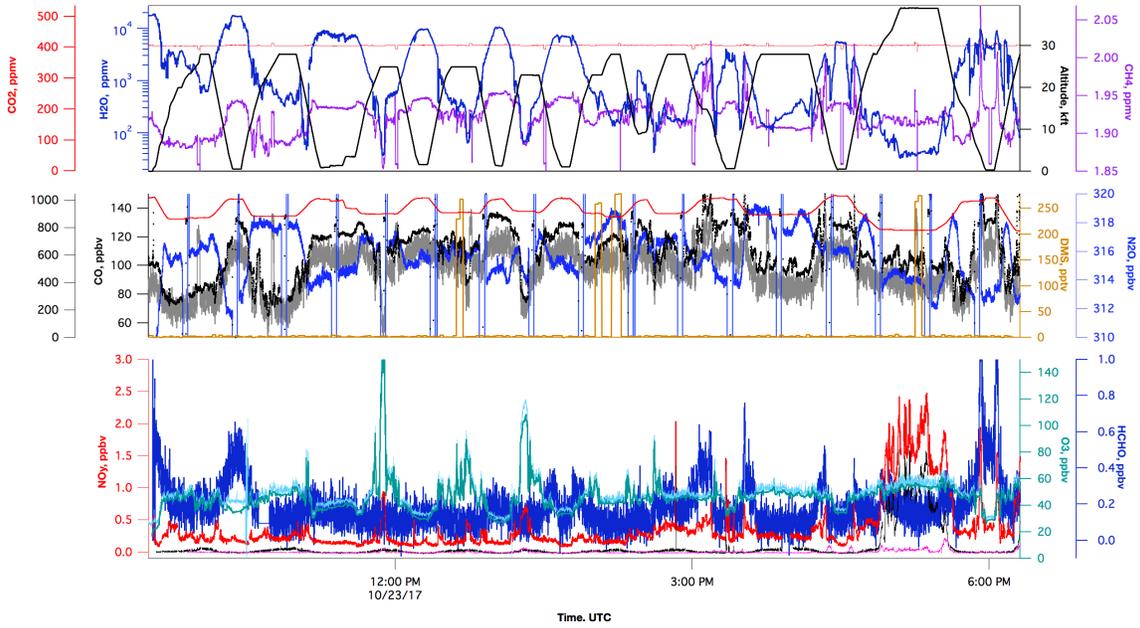


LPLA-KBGR

On-time takeoff 09:34 LT (09:34 UT)

Landing 14:59 LT (18:59 UT)

- Re-planned flight to land in Bangor, Maine, due to weather forecast at Thule – snow/rain forecast for next three days.
- Just after takeoff, spent a few min at FL200 for coordination with Bae-146 payload.
- Reached FL280 before descent.
- Profile one – mixed layer 30 knot winds, lots of sea salt mixed with some ‘accumulation mode’ aerosol. Toga notes presence of iodine containing organic compounds.
- PALMS observed anthropogenic aerosol constituents (metals) mid trop. Level off at FL280 for 10 min.
- 2nd profile – really windy in mixed layer: 45-60 knots. With lots of time and fuel, we did a flux maneuver (on route, three layers, 500, 1000, and 3000 ft). Lots of PAN, and other anthro tracers here, but very little HCHO.
- Very clean of particulate at FL090 on climb out. Some lower stratospheric air FL210 and again at FL250 (top of this profile).
- 3rd profile – still very windy (40 knots at 500’). As in 2nd, no enhancement in HCHO in / above bl. Climb to FL250.
- Much less wind in the mixed layer on the 4th profile (<10 m/s). Visibility is poor here – climbed after 4 min.
- 5th profile just before Greenland – windy again (40 knots). Low visibility here --- cloud covered. Climb to FL230, then to FL280. No lower stratosphere on this leg.
- 6th profile over the Greenland ice sheet (1000 ft). Climb out – Toga reports high amounts of alkanes.
- 7th profile begins after we turn south down the fjord. Local pollution in the mixed layer. Very calm.
- 8th profile(!) attained after a long ATC delay in descent. Low leg in clear air.
- Climb to FL390 – lots of NO_x up here, presumably from aircraft.
- 9th and final profile(!) over the mouth of the St. Lawrence River. 500 ft did not get into mixed layer (50% RH, very light winds). Toga reports “tonnes of monoterpenes”.
- Toga refilled LN₂ during final climb to be able to get all compounds during descent into Bangor.



Debrief

- CAFS – trouble getting started, but good flight.
- NOy – good.
- DLH- good.
- Picarro good.
- QCLS good.
- SAGA good.
- Panther/UCATs. A mass spec failed during flight. Otherwise good.
- A02/Medusa. good.
- GT-CIMS good.
- NOAA CIMS good.
- WAS good.
- MMS good.
- TOGA – OK.
- AMP- good.

CAPS Lost some data due to fogging.
PALMS. good.
ATHOS. good.
ISAF. Good.
SP2 – Good.
HRAMS. Good. [please more warning for flux legs].
CITCIMS. Good.

We had excellent weather for this transect to Bangor. We reached the lowest altitude possible on all profiles. The traverse across Greenland was stunningly beautiful. After turning south, we had reasonably good coordination with ATC allowing us to get the two planned profiles west of Greenland. All instruments performed well with minimal data loss. We saw many different types of air on this flight. Very large contrast between the atmosphere in the Central and Western Atlantic.

Off the left of the plane as we turn to head south near Kangerlussuaq:

