

## PUQ-PUQ (Antarctic Flight)

On-time takeoff 08:35 LT (11:35 UT)

Landing 19:16 LT (22:16 UT)

- CAFS computer fails just before TO. Nadir spectrometer does not record data.
- First profile moved earlier to the middle of the Drake passage (-59 lat) to avoid weather forecast at our planned first low point.
- ATHOS laser got too cold and shut down.
- Consistent presence of high CO and biomass burning tracers at and below the tropopause.
- New particle formation event observed 15:40 UT & 16:42 & 20:32
- South low point moved south from plan to avoid penguin restriction. Level at 1000 ft AGL means a steady climb up the ice field.
- Added a partial dip between PT6 and PT7 to avoid cold soaking instruments further. ISAFS laser having problems; fails ~19 UT.
- 19:18 UT – lots of small particles; DMS also seen.
- On final profile, several instruments noted ice formation in their inlets.



## Debrief

CAFS – Zenith worked all flight; Nadir not at all.

NOy – ozone generator failed at end of flight.

DLH good.

Picarro good.

QCLS good.

SAGA good.

Panther/UCATs good.

A02/Medusa. Medusa had problems on first dip.

GT-CIMS good.

NOAA CIMS good.

WAS good.

MMS good.

TOGA good. Lost 10 min during first descent.

AMP/AGA good. Flow meter on main bypass inlet failed(?)

CAPS good.

PALMS. good. Maybe lost last profile due to ice(?).

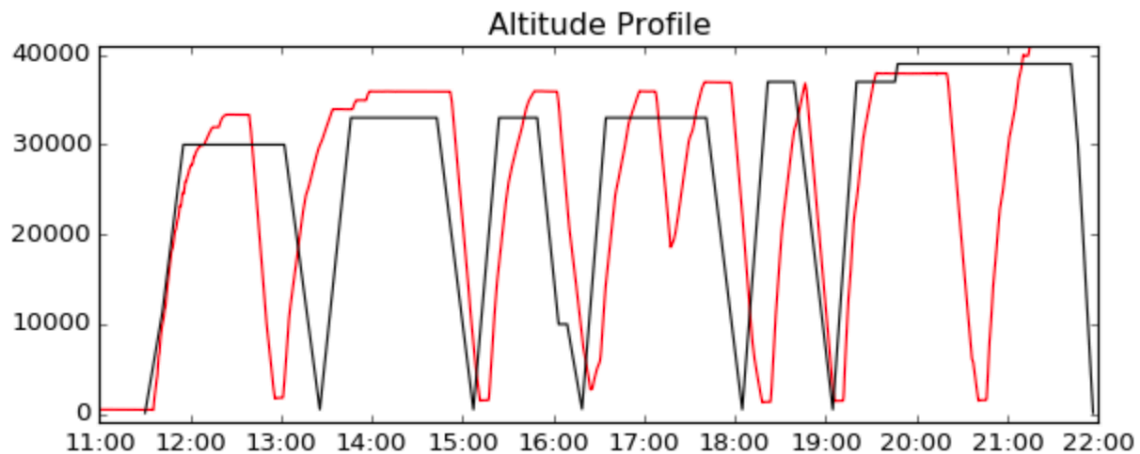
ATHOS. supercharger fixed; Laser turned off due to cold soak.

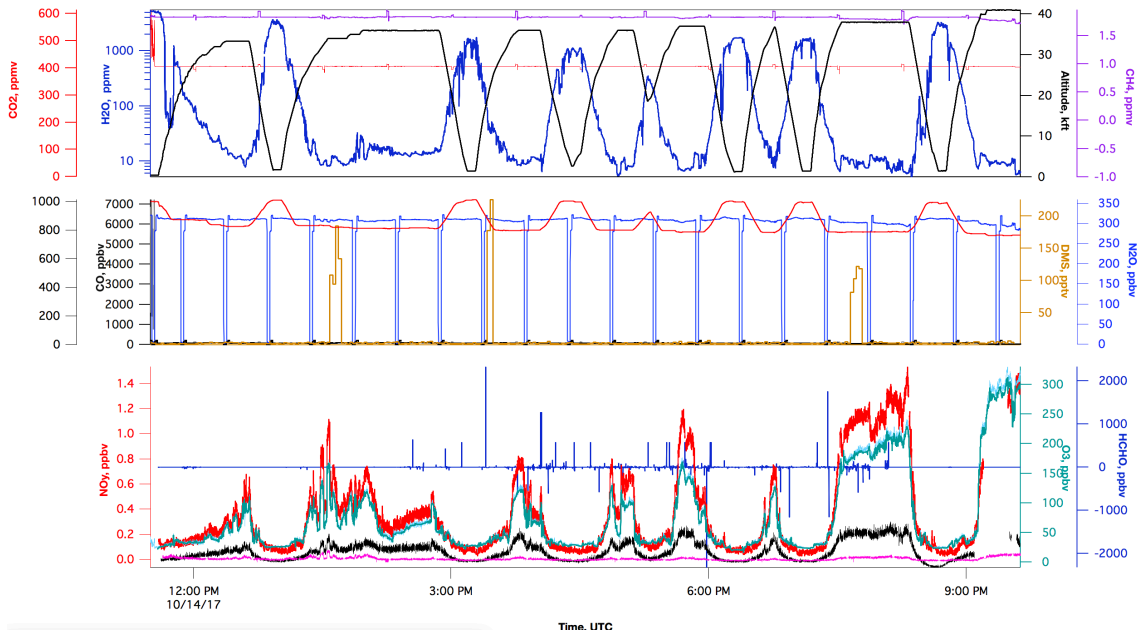
ISAF. laser issues throughout; failed ~19 UT.

SP2 – First 8 hours great; no data after 19:30 UT due to flow issues.

HRAMS good.

CITCIMS good.





We obtained 6 full and 1 partial profile (not including TO and landing) all reaching the lower stratosphere. The highest ozone (~300 ppb) was observed just south of Punta Arenas. Beautiful views today of the Weddell Sea, and on the way home of the Palmer Peninsula. But, as Dave Tanner noted, "this is a harsh continent and it lived up to it today – lots of instrument issues". Good that we have two days before the scheduled departure for Ascension Island.