

ACAM Flight Report

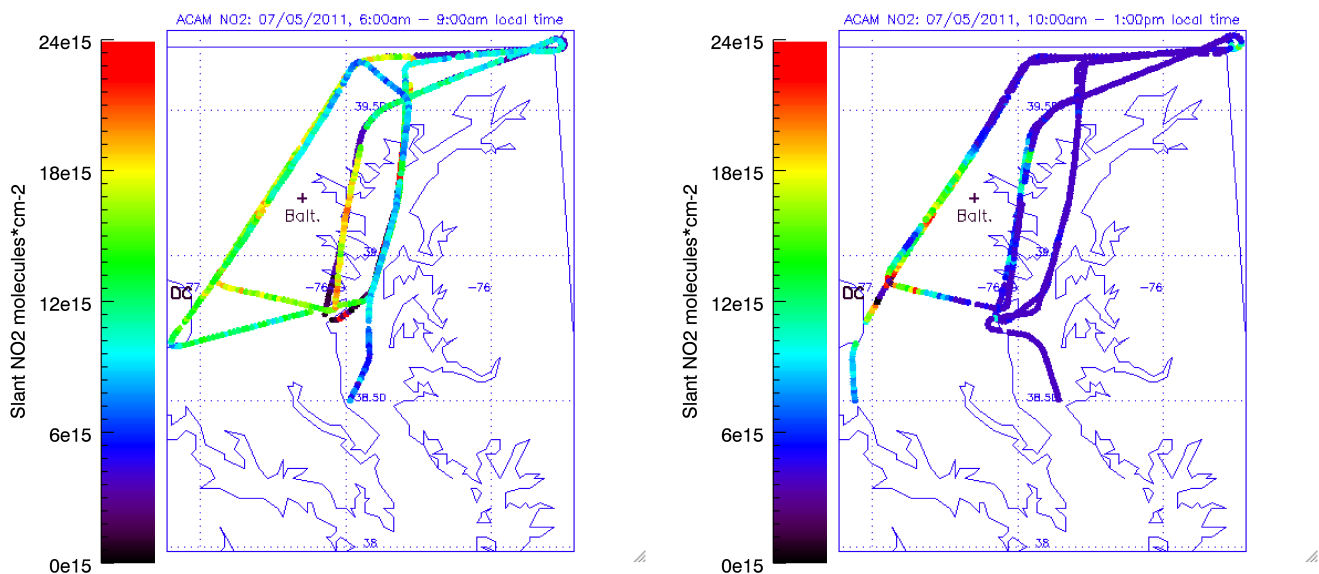
Flight #3 – 07/05/2011

Operations and instrument status

Instrument performance was normal. Due to the early take-off time, the first D.C. pass and run up the I-95 corridor was too dark to perform retrievals.

Science Summary

NO₂ measurements are shown below as differential slant column values relative to a spectrum with low boundary layer NO₂ and at near minimum solar zenith angle. Highly variable NO₂ structure is seen in the immediate DC area and along the I-95 corridor for both flight segments. Note that much of the elevated signal seen in the first segment is due to low sun angle enhancement although there are some localized peaks along the bay runs. The largest peaks (25×10^{16} molec.cm⁻²) are observed during the second segment at 10:30 am 11:45 am along the I-95 corridor.



Preliminary NO₂ data. Swath averaged resolution 7.5km x 1.2km

Time series for NO_2 and O_3 . (HCHO was below the minimum instrument sensitivity and is not shown) The gradual decrease seen in the O_3 trace in the early morning is due to the decrease in absorption path length as the sun elevation increases relative to sunrise.

