

# ACAM Flight Report

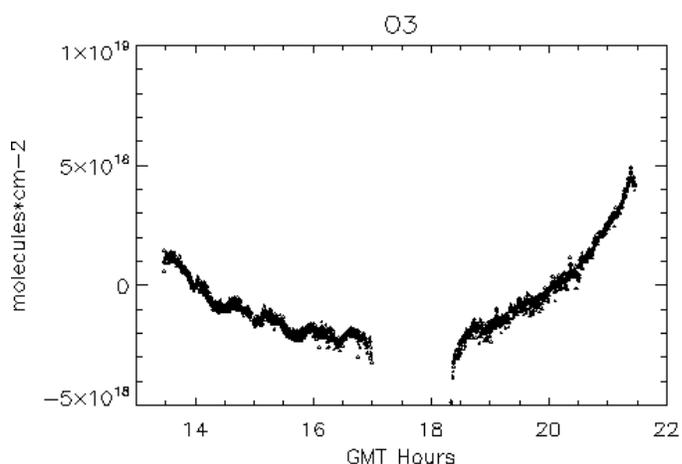
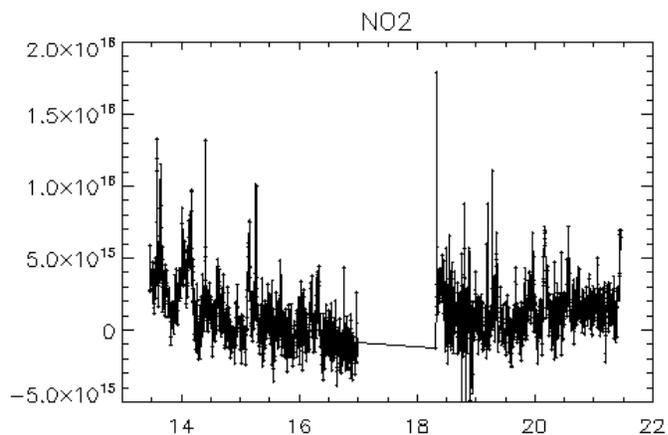
## Flight #4 – 07/10/2011

### Operations and instrument status

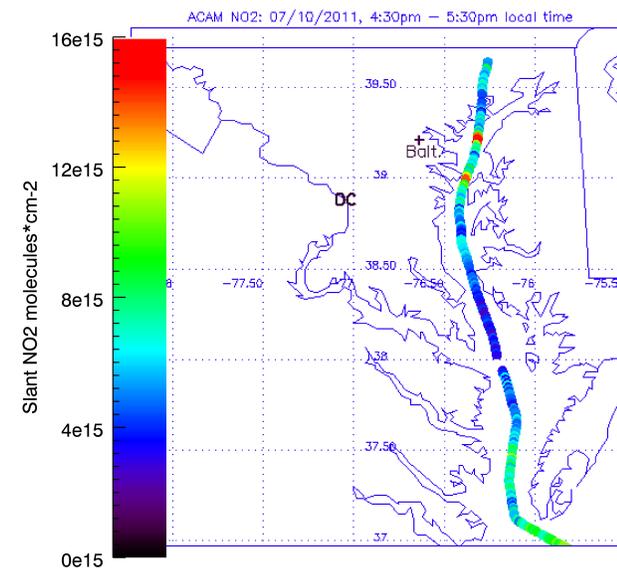
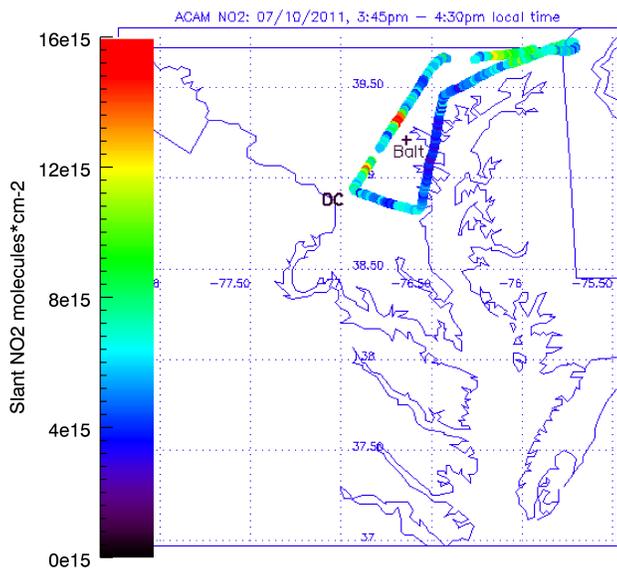
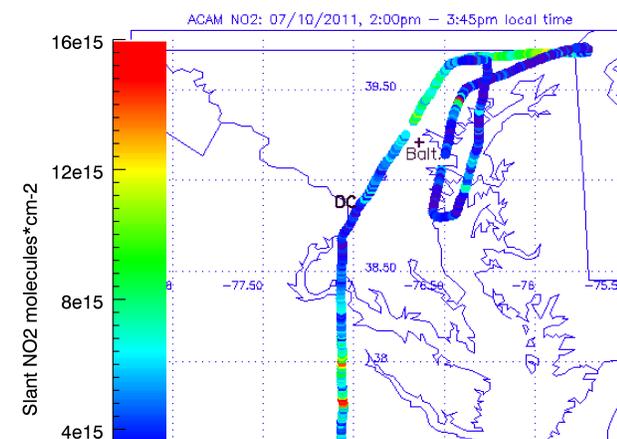
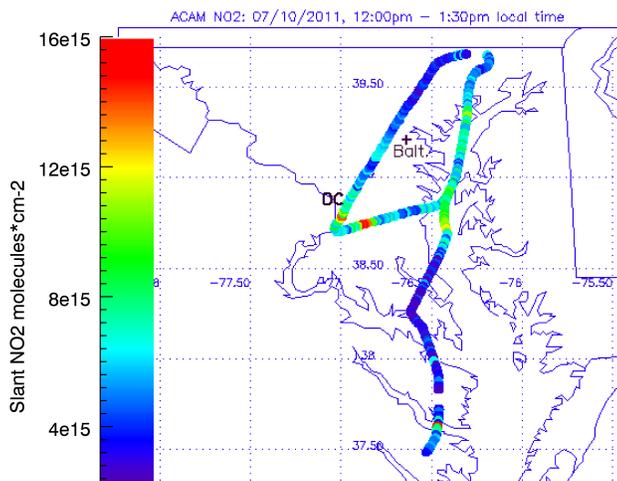
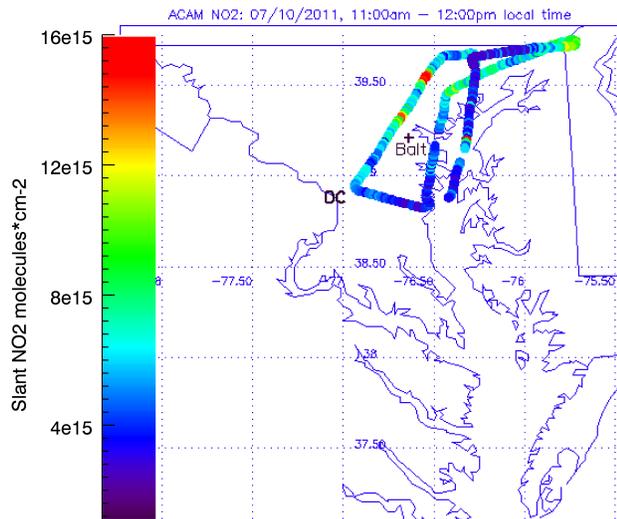
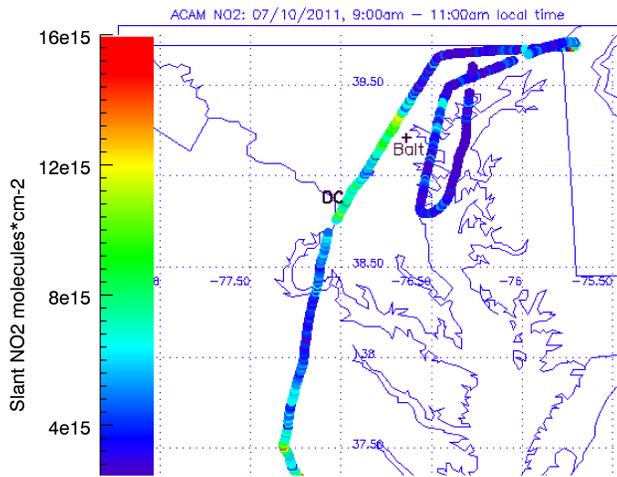
Instrument performance was normal. Timing of pre-flight cool down relative to take-off at Patrick Henry is sufficient to stabilize instrument temperatures by the time the aircraft reaches DC.

### Science Summary

NO<sub>2</sub> measurements are shown below as differential slant column values relative to an average of spectra taken between the periods of 16.8 to 17.2 UTC and 20.6 to 21.0 UTC. Some structure is seen near the Richmond beltway on the trip up to DC and in the expected areas along 95 and MDE sites. In general the NO<sub>2</sub> levels are not as high as was seen during the first 3 science flights, especially in the afternoon. Peak values rarely exceeded  $1 \times 10^{16}$  molec.cm<sup>-2</sup> which is a factor of 2 lower than peak values on the 5<sup>th</sup>.



Time series plots of NO<sub>2</sub> and O<sub>3</sub>.



Preliminary NO<sub>2</sub> data. Swath averaged resolution 7.5km x 1.2km