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# Photochemistry in the tropical marine Atlantic: What can be learnt from model measurement comparisons?

**M. Evans** (1), L. Carpenter (2), A. Lewis (2), K. Read (2), J. Lee (2), J. Hopkins(2)

(1) Institute for Atmospheric Science, University of Leeds, Leeds, UK (mat@env.leeds.ac.uk), (2) School of Chemistry, University of York. York, UK

Observations of ozone, oxides of nitrogen, and volatile organic compounds made from the new long term atmospheric observatory based at Cape Verde, off the western coast of Africa, are compared to the output of a global atmospheric chemistry transport model (GEOS-CHEM). The model fails to capture short term (daily) variability in many of these species, but does simulate appropriate synoptic variability and the annual cycle. We suggest that the model is missing an important component of the photochemical system (probably fast halogen chemistry) which acts on the air reaching the observatory on a time scale of hours rather than days or months due to the transport pathways. This work emphasises the strength of considering all relevant timescales when interpreting model measurement comparisons.