



Trace gas fields from MOZAIC for global model evaluation

K. Thomas (1), A. Kunz (1), H.-W. Pätz (1), M. Schultz (1), H. Smit (1), A. Volz-Thomas (1), J.-P. Cammas (2), P. Nedelec (2), V. Thouret (2)

(1) Institute for Chemistry and Dynamics of the Geosphere II, Research Centre Juelich, Germany, (2) Laboratoire d'Aerologie, CNRS, Toulouse, France (k.thomas@fz-juelich.de)

The poster will present climatologies of O₃, CO and NO_y derived from measurements made aboard MOZAIC (Measurement of ozone, water vapour, carbon monoxide and nitrogen oxides aboard Airbus in-service aircraft) aircraft in terms of average concentrations and variability on different spatial and temporal scales. Separation between lower stratosphere and upper troposphere is achieved by means of potential vorticity.

In winter, NO_y concentrations in the upper troposphere are usually below 0.5 ppb, whereas concentrations of several ppb are observed in spring and summer, in particular over the western North Atlantic but also over Europe and the Arabian Peninsula. Very high CO concentrations are observed over East Asia and Northern Canada as a result of biomass burning.

The MOZAIC data are analysed in form of seasonal variability and probability distributions for different geographical regions and altitudes in order to provide a tool for the testing of global chemistry transport models. First result from the comparison of MOZAIC data with MOZART-III/MOZECH are presented and discussed.