



Use of MOZAIC-IAGOS Data

Measurement of Ozone, water vapour, carbon monoxide and nitrogen oxides by Airbus in-service aircraft

The MOZAIC database contains data from more than 100 million flight kilometres in the upper tropopause region and more than 50000 vertical profiles.

<http://mozaic.aero.obs-mip.fr>

3-) Validation of Satellite Data Products

The following instruments have been validated using MOZAIC data:
MOPITT, TES, AIRS, ACE, IASI, ...

MOZAIC CO profiles are of particular interest.

Examples of co-located CO vertical profiles (Clerbaux et al., ACP 2008)

MOZAIC data also help in constructing more detailed and accurate a priori profiles for O₃ retrievals (in complement to radiosoundings for the stratospheric part of the profile)

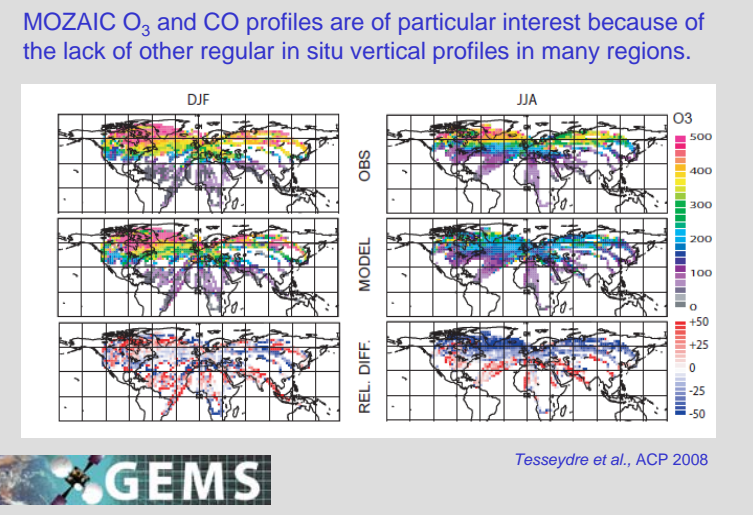
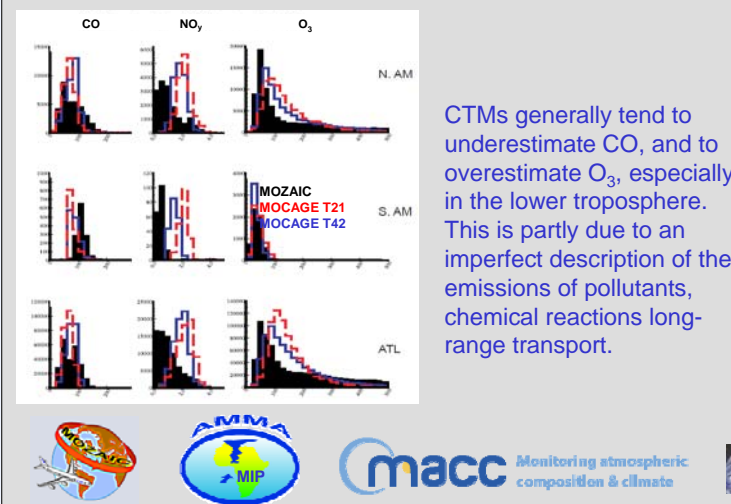
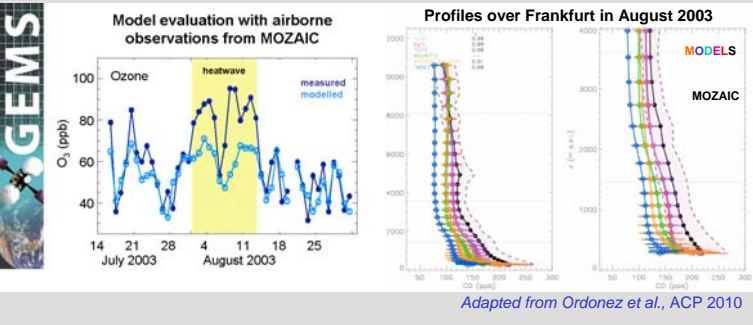
Barret et al., MOZAIC News, 2010

1-) Global Scientific Community

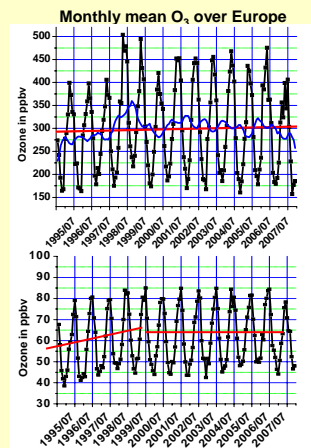
More than 200 publications in peer reviewed journals using MOZAIC data
More than 10 Phd Thesis using MOZAIC data

2-) Evaluation of Global and Regional CTMs

Since the beginning of the program, MOZAIC data have been used to evaluate CTMs, either in the frame of MOZAIC itself or in the frame of other European projects.



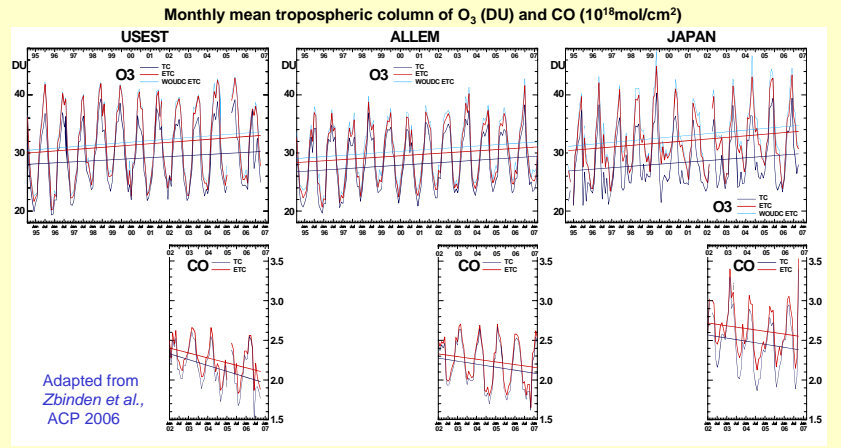
4-) Longterm Trends in the Troposphere and Lower Stratosphere



MOZAIC provides accurate measurements throughout the troposphere and in the lower stratosphere since 1994 for O₃ and H₂O and since 2002 for CO and NO_y with the same instruments. This allows a first assessment of trends and interannual variability.

Robust conclusions on long-term trends require many more years of measurements.

Adapted from Thouret et al., ACP 2006



Acknowledgement

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