



## **Regular vertical profiles of ozone and precursors from MOZAIC for regional air quality**

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Measurements made since 1994 aboard five A-340 aircraft within the MOZAIC project (Measurement of ozone, water vapour, carbon monoxide and nitrogen oxides aboard Airbus in-service aircraft) provide useful information on air quality in the vicinity of many cities.

In order to facilitate the use of the data, the MOZAIC dataset was characterised in terms of location of the airports with respect to the cities and major industrial areas, as well orographic effects that can influence the local circulation patterns and climate zones following Köppen and Geiger.

The Poster presents the analysis for four airports in the Eastern United States, for which more than 50 vertical profiles are available. The data are presented in form of vertical profiles of trace gases (O<sub>3</sub>, H<sub>2</sub>O, CO and NO<sub>y</sub>) and seasonal cycles at different altitudes. The influence of local versus regional sources is discussed on the basis of the trace gas distributions with wind direction.

The influence of weather regimes and circulation patterns on ozone and its precursors at the different airports is investigated by means of a weather type classification.