



## The Extratropical Tropopause during SPURT

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During the SPURT-project (SPURenstofftransport in der Tropopausenregion, trace gas transport in the tropopause region) airborne in-situ trace gas measurements were performed from 2001 - 2003 on a regular basis. Eight measurement campaigns consisting of four flights each facilitated an overview on the tropopause region over Europe from 35° - 75° N.

The vertical profiles which were taken are used to compare different tropopause definitions with in-situ measurements of various trace gases such as ozone and CO and correlations among these.

When using a threshold of 2 PVU for the tropopause we find in general a good agreement between the dynamical and the thermal definition with the latter being shifted to higher geometrical altitudes. We find slight indications for an increasing PV-value with latitude at the thermal tropopause.

Comparison with the trace gas measurements reveals that changes of trace gas gradients are better reproduced when using the dynamical definition with PV = 2 PVU. During most seasons we find a mixture of tropospheric and stratospheric trace gas composition extending below the PV = 2 PVU surface.