



## **Stratospheric transport barriers: Observational and model approaches**

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We investigate transport regimes in the stratosphere based on observations of CO, N<sub>2</sub>O and CO<sub>2</sub>. In a first step we use stratospheric high resolution in-situ measurements from various airborne platforms to deduce transport times in the stratosphere. The results will be compared to other observations and model results.

The approach is then extended to the coupled GCM ECHAM5/MESSEy to obtain a global view. Applying the new method the location of mixing barriers can be detected which also show up in the observations of MIPAS. In addition the new method indicates patterns which coincide with the model results indicating regions of rapid transport and mixing.