



Lagrangian reconstructions of chemical tracers nearby the tropical tropopause

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Distribution of chemical compounds in the region of tropical tropopause is partly due to transport. In this work, a dataset of high-resolution profiles of chemical tracers (O_3 , N_2O and CH_4) collected in the tropics during Hibiscus and Troccinox campaigns in 2004 and 2005 is compared to diffusive Lagrangian reconstructions.

Two different aspects are addressed here:

First, turbulent vertical mixing is estimated using the method of diffusive backward trajectories. In particular, we can quantify the effect of stratospheric intrusions on the air mixture.

The second addressed aspect is the sensitivity of reconstructions to variations in the time resolutions of the advecting ECMWF wind fields.

Prospective actions related with SCOUT-O3 project are also discussed.