



The Chemical Circulation Model ECHAM5/MESSy1 compared to Aircraft Measurements of 3 tropical Campaigns

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Results of simulations with the chemical circulation model ECHAM5/MESSy1 in different horizontal and vertical resolutions are compared with measurements during the SCOUT-O3-, AMMA- and TROCCINOX-campaigns along flight tracks. For direct point by point comparison tropospheric meteorology of the CCM was nudged to observations (ECMWF). We focus on ozone, carbon monoxide, nitrogen oxides and longlived tracers in the tropical tropopause layer and reasons for discrepancies for the different meteorological situations. Except for ozone during the SCOUT-O3-campaign near Darwin, where a model resolution of T42/L90 appears to be not sufficient, the agreement is usually within the experimental uncertainty and the variability between horizontally neighboring gridpoints in the simulation.