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# Comparison between in-situ measured and modelled CH4 and CO2: Recent TDLAS CH4 and CO2 measurements from the ITOP campaign

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The ITOP (Intercontinental Transport of Ozone and its Precursors) campaign took place during July and August 2004, based in Faial - in the Azores. The aim of this international campaign was to study the intercontinental transport of air pollutants over the East coast of North America, the Azores and the West coast of Europe. The FAAM (Facility for Airborne Atmospheric Measurements) BAE-146 aircraft was used by UK scientists to make in-situ atmospheric measurements from the Azores. Back trajectories have been used to interpret in-situ measurements of CH4 and CO2 made during ITOP. The back trajectories arrive at regularly-spaced points along each flight track. These trajectories have been used to identify the origins of air masses sampled on board the BAE-146. Comparisons will be drawn between TDLAS (Tunable Diode Laser Absorption Spectrometer) CH4 and CO2 in-situ measurements and modelled CH4 and CO2 values at the origin of each back trajectory. The latter were taken from the global tropospheric chemistry-transport model, p-TOMCAT. The intention is to use a combination of modelled and measured CO and CO2 concentrations to diagnose where significant mixing has taken place within air parcels, sampled during the ITOP campaign.