



Hydrogen peroxide and formaldehyde in the Antarctic troposphere

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As part of the Chemistry of the Antarctic Boundary Layer and the Interface with Snow (CHABLIS) project, hydrogen peroxide (H_2O_2) and formaldehyde (CH_2O) were measured at an Antarctic coastal site (the British Antarctic Survey Base, Halley) with the aim of understanding the concentrations of these species in the remote troposphere and to investigate their interaction with snow. The campaign has been running for a year and will culminate with an intensive austral summer campaign in 2005.

H_2O_2 and CH_2O are closely related to the O_x , HO_x and NO_x cycles in the troposphere. They are secondary products formed during the oxidation of organic compounds and influence the oxidative capacity of the atmosphere because they are precursors to, and sinks for, OH and HO_2 . We will present the observational dataset of H_2O_2 and CH_2O obtained from Antarctica and discuss its behaviour on daily, synoptic and seasonal timescales. We will then interpret these observations using a global atmospheric chemistry transport model (GEOS-CHEM).