



Correlations, lifetimes and fractional release of long-lived halocarbons in the extra-tropical stratosphere

Johannes C. Laube (1), Michel Bolder (2), Thijs F. Duindam (2), William T. Sturges (1), and Thomas Röckmann (2)

(1) School of Environmental Sciences, Norwich, United Kingdom (j.laube@uea.ac.uk), (2) Institute for Marine and Atmospheric Research, Utrecht University, The Netherlands

Whole air samples collected with the Geophysica high altitude research aircraft during flights near Oberpfaffenhofen, Germany and Kiruna, Sweden between November 2009 and February 2010 were analysed for their halocarbon content using Gas Chromatography with Mass Spectrometric detection. We present compact correlations for a number of known species such as CFC-12, CFC-13, HCFC-142b, H-1301 or HFC-134a to name but a few, but also for a number of long-lived compounds that have not been observed in the atmosphere before. The lifetimes and relationships to mean age of air are discussed as well as the fractional release of chlorine and bromine from the relevant compounds.