



MAX-DOAS Observations of reactive Halogen Compounds at different Latitudes

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This study presents ground-based measurements of reactive halogen compounds (BrO and IO) by means of UV/visible spectroscopy at different latitudes. The measurement sites range from northern high latitudes (Ny-Ålesund, 79°N, 12°E and Summit, 72°N, 38°W) over mid-latitudes (Sylt, 55°N, 8°E and Zugspitze, 47°N, 11°E) to low latitudes (Mérida, 8°N, 71°W).

In addition to the zenith viewing direction four different lines of sight close to the horizon have been used. With this MAX-DOAS (multi-axis Differential Optical Absorption Spectroscopy) technique it is possible to derive profile information for the retrieved absorbers using an adequate radiation transport model (e.g. Wittrock et al., 2004).

Both the seasonal and diurnal variation for bromine monoxide and iodine monoxide is discussed in detail. Furthermore possible sources are examined.

F. Wittrock, H. Oetjen, A. Richter, S. Fietkau, T. Medeke, A. Rozanov, and J. P. Burrows, MAX-DOAS measurements of atmospheric trace gases in Ny-Ålesund - Radiative transfer studies and their application, *Atmos. Chem. Phys.*, 4, 955-966, 2004.