



Seminar on Physics and Chemistry of the Atmosphere (SoSe 2014)
Seminar talk, 04.07.2014

Peroxy radical detection: Calibration of the effective chain length

Peroxy radical detection via chemical amplification and subsequent detection of nitrogen dioxide requires knowledge about the amplification factor, called effective chain length. This factor depends on different parameters (pressure, reaction time, peroxy radical species ...) and thus must be calibrated.

PeRCEAS (Peroxy Radical Chemical Enhancement and Absorption Spectroscopy) is an aircraft instrument designed for the HALO (high altitude and long range) aircraft and consists of an inlet to draw outside air samples and to facilitate the chemical amplification, and an inside instrument incorporating the nitrogen dioxide detectors. PeRCEAS will take part in the OMO (Oxidation Mechanisms Observation) measurement campaign, starting in the end of 2014.

The talk will present an overview about the measurement principle, the PeRCEAS instrument and the effective chain length calibration.