ACTRIS

Overview

The Aerosols, Clouds and Trace gases Research Infrastructure (ACTRIS) is a distributed infrastructure dedicated to high-quality observation of aerosols, clouds, trace gases and exploration of their interactions in the system of atmosphere – climate – environment – humans. Based on modern measurement methods it delivers precision data regarding the 4D variability of the physical, optical and chemical properties of short-lived atmospheric components. The research infrastructure offers access to European and worldwide distributed atmospheric observatories and research laboratories. Multifaceted services, like free access to data by a central data center, the calibration of instruments at several European calibration centers as well as education and training of employees are parts of ACTRIS. Furthermore innovative enhancements from measurement technics and observation methods in close cooperation with industrial partners belong to the infrastructure.

EU project ACTRIS-2

Development work regarding atmospheric observations and the setup of central facilities (data centre, calibration centres) is currently supported in the EU project ACTRIS-2 (2015-2019). TROPOS has several coordinating tasks in ACTRIS-2. The Remote Sensing department has the lead for the development and integration of aerosol and cloud profiling (EARLINET and Cloudnet). The Experimental Aerosol and Cloud Microphysics department coordinates the quality assurance for aerosol in-situ observations and develops the European Centre for Aerosol Calibration. The Chemistry department organizes the Transnational Access (TNA) to the research station Melpitz. In addition, TROPOS contributes to the Joint Research Activities (JRA) on aerosol absorption and on aerosol turbulent exchange and vertical transport.

ACTRIS in ESFRI and ACTRIS-D

ACTRIS has become a project of the ESFRI Roadmap 2016 (European Strategy Forum on Research Infrastructures) and shall be developed to a powerful, long-term RI within the next years. Next to the activities for measuring aerosols and short-lived trace gases near the surface and of vertical profiles of aerosols and clouds further infrastructure components shall be integrated in ACTRIS in the future: the simulation chambers for the investigation of processes related to short-lived atmospheric components and coordinated at European level within the EUROCHAMP projects as well as parts of the global NDACC measurement network for trace gases in the atmospheric column. TROPOS has taken the lead for the German ACTRIS activities (ACTRIS-D) and has coordinated a proposal of ACTRIS-D for the National Roadmap for Research Infrastructures.