Project: Observations of the TCO group in AES department

Project acronym for link in /pool/data: OBS

Principal investigator (long-term responsible contact): Lutz Hirsch

Applicant (if not the same as above): Lutz Hirsch

Allocation period: 05/2022 - 12/2032

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Volume	18 TB
Expected Volume Change	+ 15 TB
License allows usage on DKRZ resources	CC-BY

Project overview

This project comprises of the level1 data of the Barbados Cloud Observatory (BCO), as well as data of different levels of the international field campaign EUREC4A.
The BCO data are updated on a regular scheme as rsync from from the MPI data structures, to enable all mistral rsp. levante users to access the BCO level 1 data from the DKRZ architecture.
The EUREC4A data are permanently (not changing) stored with the same purpose as for the BCO data.

Details of the BCO are described in:
Stevens, B., et al., (2016). The Barbados Cloud Observatory — anchoring investigations of clouds and circulation on the edge of the ITCZ. Bulletin of the American Meteorological Society, 97, 787-801

The EUREC4A campaign is described in:
Stevens, B., et al., (2021). EUREC4A. Earth Syst. Sci. Data, 13, 4067–4119, 2021 https://doi.org/10.5194/essd-13-4067-2021

Data content

The BCO and the field campaign represent two of the TCO group's flagship activities.
Established in 2010, the BCO routinely profiles clouds, precipitation, aerosol, water vapor and wind.
On the BCO the group is operating two cloud radars at different frequencies, different multi-channel Raman LIDARs,
a wind-LIDAR and micro-wave Radiometer supported by a number of additional instrumentation.

EUREC4A the field campaign, another flagship activity, has been conducted in 2020 with a major participation of the TCO group.
The data set includes data from 3 different research aircraft and a link to the BCO data recorded in that IOP.

Range of planned scientific data usage

Usage of both datasets is at the core of the scientific current and future interest of the TCO group and also other group in the AES department, as well as of scientist with an external status at the MPI. A continually growing number of publications is based on these data sets.

Data Storage Usage Plan

The current data volume for the BCO part is 1.3 TB.

It can be assumed to grow by 1 - 2 TB over the years.

The EUREC4A data set has a size of 16 TB and will not change significantly anymore,
but further field campaigns like the just concluded HALO-AC3 campaign and the HALO campaign ECVAL-TOOC in 2024 are likely to add similar amounts of data to the /data/OBS project.