CERTAINTY Newsletter #2 - October 2024

CERTAINTY CLOUD-AEROSOL INTERACTIONS

& THEIR IMPACTS IN THE EARTH SYSTEM

News



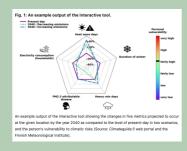
Visit the <u>news section</u> of our website to stay updated and learn more about our project:

- How is CERTAINTY working towards transparency and the sharing of scientific knowledge;
- The role of dust in weather and climate;
- <u>The impact of tailored climate information on</u> attitudes towards climate policies & perceived distance to climate change;
- How will CERTAINTY contribute to CMIP7.

See all web stories

Latest publications





<u>A model study investigating the sensitivity of aerosol</u> forcing to the volatilities of semi-volatile organic compounds

Muhammed Irfan, Thomas Kühn, Taina Yli-Juuti, Anton Laakso, Eemeli Holopainen, Douglas R. Worsnop, Annele Virtanen, and Harri Kokkola

Atmos. Chem. Phys., 24, 8489-8506 (2024)

<u>How tailored climate information affects attitudes</u> <u>towards climate policy and psychological distance of</u> <u>climate change</u>

Mira Hulkkonen, Tero Mielonen, Saara Leppänen, Anton Laakso and Harri Kokkola npj Clim. Action 3, 54 (2024)

See all published papers

EarthCARE

The data collected during EarthCARE overpasses will be used to address several CERTAINTY objectives related to ACI for natural aerosols such as marine and dust particles.

1/ NOA participates in the BOW-TIE sub-campaign

The Research Vessel METEOR, Germany's third-largest research vessel, is being deployed in the ORCESTRA campaign for the BOW-TIE sub-campaign.

BOW-TIE aims to study how convective storms and their interaction with the ocean affect the Atlantic Intertropical Convergence Zone. Key measurements include precipitation, cloud & aerosol/humidity/wind profiles, wind, temperature, current, salinity.

The campaign also explores cloud-aerosol interactions in the ITCZ. For BOW-TIE operations, targeted measurements have been performed during 5 EarthCARE overpasses over the METEOR location.

2/ Highlights from DLR

The team has just completed its first two parts of the PERCUSION campaign out of Sal (Cape Verde) and out of Barbados.

PERCUSION seeks to understand how airmass properties and mesoscale dynamical processes impact the ITCZ, and to investigate the organization of shallow and deep convection and their influence on the clouds' radiative effect. In this respect the following topics are of special interest: anergy balance, Aerosol-cloud-precipitation interaction, and (thermo-)dynamical processes. Next to the scientific objective of PERCUSION the campaign also aims to validate EarthCARE and thus to guide the use of its data.

During the first two parts of PERCUSION 21 EarthCARE underpasses in various aerosol and cloud regimes have been conducted. After a break validation flights will continue out of Oberpfaffenhofen (Germany) in November.

For more info:

- an overview of the flights <u>here</u>
- an overview of BOW-TIE <u>here</u>
- and an overview of PERCUSION <u>here</u>



Silke Gross (DLR) in the field with the aircraft.



Peristera Paschou (NOA) aboard the METEOR German research vessel.

Upcoming events



11 – 14 FEBRUARY IN GRENOBLE, FRANCE

ERCA school, 19-31 January 2025 in Grenoble, France

Application by 13 October: <u>www.erca-school.eu</u>

CERTAINTY annual meeting, 11-14 February 2025 in Grenoble, France

Further details will follow in due course

