

Subject: Announcement of opportunity for EarthCARE Calibration and Validation

Dear colleague,

ESA is pleased to release the Announcement of Opportunity (AO) for the Calibration and Validation of the Earth, Cloud and Radiation Explorer (EarthCARE).

EarthCARE is a mission developed in the framework of the ESA Earth Explorer Programme, in collaboration with JAXA.

The EarthCARE payload consists of:

- An Atmospheric Lidar (ATLID), that provides vertical profiles of aerosols and thin clouds,
- A Cloud Profiling Radar (CPR) provided by JAXA, which measures vertical profiles of clouds and has the capability to observe vertical velocities of cloud particles through Doppler measurements.
- A Multi-Spectral Imager (MSI), that provides across-track information on clouds and aerosols with channels in the visible, near infrared, shortwave- and thermal infrared.
- A Broad-Band Radiometer (BBR), that provides measurements of top-of-the-atmosphere radiances and fluxes. It delivers SW and LW data from three fixed viewing directions pointing in fore-, nadir, and aft-directions

The mission is scheduled to be launched in September 2019 and will provide over 3 years of data to the user community.

This ESA Announcement of Opportunity solicits proposals for the validation of the EarthCARE ESA products, namely the ATLID, MSI, and BBR level 1 products and the ESA level 2 products, which are generated from ESA (ATLID, MSI, and BBR) and JAXA (CPR) level 1 input data. The validation of the JAXA products, namely the CPR level 1 products and the JAXA level 2 products, that are generated from lower level ESA (ATLID, MSI, BBR) and JAXA (CPR) input data has been subject of a separate Research Announcement under JAXA responsibility.

This Announcement of Opportunity is international and non-restrictive, i.e. i.e. it is open to participants from anywhere in the world.

The activities solicited through the present AO are to provide independent experimental data, analysis and recommendations to assess the end-to-end performance of the instrument and its products. This includes:

- validation of EarthCARE products using other satellite, airborne or ground-based experiments as well as measurement networks providing independent measurements of atmospheric backscatter profiles, clouds and aerosols, and auxiliary parameters
- experiments to assess accuracy, resolution, and stability of the ATLID, MSI, BBR, and CPR instruments.
- assessment and validation of the retrieval and processing algorithms



Further details about this AO, the EarthCARE Mission and data description are available at the following Web address:

<http://earth.esa.int/aos/EarthCARECalVal>

The deadline for submission of proposals is 15 October 2017

Please submit your proposal to ESA through the Web address above.

For any further information, please do not hesitate to contact us via ESA's EO helpdesk.

We are looking forward to receive your response to this Announcement of Opportunity.

On behalf of ESA:

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