

Orverview of Earth Clouds, Aerosols and Radiation Explorer (EarthCARE) projects

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Earth Clouds, Aerosols and Radiation Explorer (EarthCARE) have been developing in cooperation between Japan and Europe. The EarthCARE will be equipped with four sensors, which are the Cloud Profiling Radar (CPR), the Atmospheric Lidar (ATLID), the Multi-Spectral Imager (MSI), and the Broad-Band Radiometer (BBR). The EarthCARE is expected to contribute to improving the accuracy of climate change projections by continuously data collection for improving numerical climate models, such as cloud and aerosol distributions and radiation balance energy, through global observation using the four sensors.

The Japan Aerospace Exploration Agency (JAXA) have been developing the Cloud Profiling Radar (CPR) in cooperation with the National Institute of Information and Communications Technology (NICT). The CPR is the first satellite-borne Doppler radar on the W-band (94 GHz), and we can observe not only the vertical structure of clouds, but also the ascending and descending velocity of clouds.

In addition, the observation data product of each sensor mounted on EarthCARE is planned to be created and offered to the user, and the analysis of the observation data and the application research using the observation data are planned. In this poster session the current status of the EarthCARE mission will be introduced.

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