

Open Discussion

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The Climate Change brings us serious impacts in the form of droughts and floods in recent years. It is quite important to understand the nature of the Earth to evaluate and manage our limited resources. Spaceborne observations have provided a fundamental information to understand large-scale Earth environment.

In this session, we will introduce the recent achievements and discuss the future collaborations with researchers who play a central role in this fields from the U.S. and Japan, focusing on two of the key topics with respect to the Climate Change. One is “how much is the substance causing the Global Warming emitted?” . The achievement by monitoring Green House Gases (GHGs) using OCO series by NASA and GOSAT series by JAXA will be presented. The other topic is “how can we predict more realistic impact by the Climate Change?” . One of the most uncertain factors in numerical prediction models is related to water cycles, such as aerosol-cloud-precipitation interactions. Toward the better understanding of this topic, NASA and JAXA have jointly developed and operated Global Precipitation Measurement (GPM) Mission following the successes of Tropical Rainfall Measuring Mission (TRMM). Recently, NASA and JAXA has started the collaboration in the new mission called Aerosols, Clouds, Convections and Precipitation (ACCP). Status of the GPM and ACCP will be presented and discussed.