

Precipitation Science with Spaceborne Precipitation Radar Observation—From TRMM to GPM—

TAKAYABU, Yukari^{1*}

¹The University of Tokyo

The Tropical Rainfall Measuring Mission satellite has been equipped with the first and only space-borne precipitation radar (TRMM PR) for sixteen years until the recent launch of the core observatory of the Global Precipitation Measuring Mission. TRMM PR has realized and accumulated three-dimensional observations of precipitation for 17 years, overlapped with the GPM core observatory for one year, and finishing its task around the end of coming March. In this talk, I will introduce some examples how TRMM has opened new horizons in precipitation science, by "measuring" the precipitation characteristics in a global scale, which could never been realized before the TRMM. We have obtained new perspectives in "precipitation climatology", which means not only precipitation amount distribution, but also precipitation characteristics and extremes. These new knowledge of precipitation should benefit to the safety of our everyday life. Some early results from the new GPM mission, started with a launch of core observatory in February 2015, will also be presented.

Keywords: TRMM, GPM, Spaceborne precipitation radar, Precipitation Science