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NOAA GCOM-W1/AMSR2 Oceanic Environmental Products: Operational Utilization and User Impacts

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Passive microwave radiometry is a special application of microwave communications technology for the purpose of collecting Earth's electromagnetic radiation. With the use of radiometers onboard earth orbiting satellites, scientists are able to monitor the Earth's environment and climate system on both short- and long-term temporal scales with near global coverage.

The Global Change Observation Mission (GCOM) is part of the Japanese Aerospace Exploration Agency (JAXA) broader commitment toward global and long-term observation of the Earth's environment. GCOM consists of two polar orbiting satellite series, GCOM-W (Water) and GCOM-C (Climate), with 1-year overlap between them for inter-calibration.

NOAA users routinely use AMSR2 data globally for monitoring ocean storms and for monitoring snow and ice over polar regions. Every orbit of data is used in blended product analysis, including global precipitation and tropical rainfall potential, total precipitable water, and snow and ice cover.

The AMSR2 imagery is critical to National Weather Service for monitoring tropical cyclone development. The much higher spatial resolution AMSR2 provides significant information on precipitation intensity and cyclone structure in the open waters, which is very important for assessing cyclone development.

NOAA produced AMSR2 ocean global products validation and its impact on near real time operations will be presented and discusse