



The NOAA/NESDIS Operational Microwave Integrated Retrieval System

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The Microwave Integrated Retrieval System (MIRS) is a state-of-the-art retrieval system developed to support POES, MetOp, DMSP, NPP/NPOESS programs at NOAA/NESDIS in generating operational temperature, water vapor, surface and hydrological parameters from microwave sensors. It is based on an assimilation-type scheme and capable of optimally retrieving atmospheric and surface state parameters in all weather and over all-surface conditions. The MIRS is being implemented at NESDIS to build a one-stop shop for operational microwave products from various satellites with different instrumental configurations.

With its capability of providing optimal and physically-based retrievals of atmospheric and surface state parameters, the operational MIRS provides advanced near-real-time surface and precipitation products in all-weather and over all-surface conditions. These products are retrieved with brightness temperature measurements from microwave instruments, including AMSU-A and AMSU-B/MHS instruments onboard NOAA and EUMET-SAT polar orbiting satellites, SSMIS on DMSP polar satellites and are operationally available to both real-time users and climate users through the NESDIS Environment Satellite Processing Center (ESPC) Data Distribution Sever (DDS) and Comprehensive Large Array-data Stewardship System (CLASS).

In this presentation, we will discuss the operational MIRS system, its products and their application in supporting NESDIS precipitation operation.