

Operational Implementation of Integrated Microwave Retrieval System

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The MIRS is a state-of-the-art retrieval system developed to support POES, MetOp, DMSP, NPP/NPOESS programs at NESDIS in generating operational temperature, water vapor, and hydrological parameters from microwave sensors. It is based on an assimilation-type scheme and capable of optimally retrieving atmospheric and surface state parameters simultaneously. It provides enhancements to the NESDIS current operational surface and precipitation products from Microwave Surface and Precipitation Products System (MSPPS), and also generates temperature and moisture profiles in all weather and over all-surface conditions. The MIRS aims to produce the operational microwave sounding, surface and precipitation products from different sensors cross several satellites, so its products are being developed and implemented into operation through a multi-years stratified phase approach. Recently, the MIRS was successfully transitioned into operation at NESDIS. Its Phase-I and –II products from POES and MetOp were declared operational, and have been made available to both real-time users and climate users through 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 transition of MIRS from research to operation, its operational implementation procedures, products validation, monitoring and dissemination. Detailed information on the operational MIRS, its products and their application in supporting NESDIS precipitation operation will also be presented.

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