

## ***NOAA/NESDIS Updates on Operational Sounding Data Products and Services***

**A.K. Sharma**

The National Oceanic and Atmospheric Administration, National Environmental Satellite, Data, and Information Services (NOAA/NESDIS) has been a pioneer in producing and distributing atmospheric sounding data products as a part of its operation for operating a fleet of civilian, Polar Orbiting Environmental Satellites (POES) and providing users and researchers a suite of operational atmospheric and environmental data products. Sounding Data Products are being generated from the advance TIROS Operational Vertical Sounder (ATOVS), onboard NOAA polar orbiting satellites (NOAA-15, NOAA-16, NOAA-17, and NOAA-18), and Infrared Atmospheric Sounding Interferometer (IASI) onboard Meteorological Operational Satellite (MetOp-1). ATOVS consists of three instruments, Advanced Microwave Sounding Units (AMSU), AMSU-A and AMSU-B, and a High-resolution Infrared Radiation Sounders (HIRS) instrument. NOAA-18 launched in May 2005 contains the Advanced Very High Resolution Radiometer (AVHRR/3), HIRS/4, AMSU-A, and the Microwave Humidity Sounder (MHS) instruments. AMSU-B has been replaced by MHS for deriving the sounding data products on NOAA-18. HIRS/4 on NOAA-18 has not been stable and has encountered numerous problems to prevent using its data in ATOVS processing. A new data distribution technique, Data Distribution Server (DDS), has been employed at the NOAA/NESDIS Environmental Satellites Processing Center (ESPC) for distributing the soundings data. This presentation will include the discussion on the ESPC system architecture involving sounding data processing and distribution for Infrared Atmospheric Sounding Interferometer (IASI), improvements made for data quality measurements, pipeline processing and distribution via DDS, and user timeliness requirements envisioned from the next generation of satellites. There have been significant changes in the operational system due to system upgrades, algorithm updates, and value added data products and services. User requirements for data products and services for sounders like ATOVS and IASI would help us determine the products and services required from the next generation of sounders such as Cross-Track Infrared Sounder/ Advanced Technology Microwave Sounder (Cris/ATMS) as planned for the National Polar-orbiting Operational Environmental Satellite System (NPOESS) program and the future missions of the European Organization for the Exploitation of Meteorological (EUMSAT) satellites. The operational IASI systems producing level 2 data will also be discussed.

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