

Improving the NEXRAD Network: an Update on NSSL Radar Division's Research-to-Operations Activities

Michael Jain

NOAA-National Severe Storms Laboratory, USA

Torres, Sebastian (CIMMS/NSSL)

Ryzhkov, Alexander (CIMMS/NSSL)

E-mail: michael.jain@noaa.gov

The National Severe Storms Laboratory (NSSL) is the primary National Oceanic and Atmospheric Administration (NOAA) organization that conducts basic and applied research and development aimed at exploring and advancing weather radar science and technology. The mission of NSSL's Radar Research and Development Division (RRDD) is to conduct research that will advance weather radar technology and develop and transfer meteorological and engineering applications, techniques and new scientific understanding to NOAA's National Weather Service (NWS) and other government, public and private organizations in order to enhance their ability to provide short-term predictions and warnings of hazardous weather.

Specifically, the NSSL RRDD is engaged in research-to-operations (R2O) activities to evolve and improve the NEXRAD WSR-88D radar in order to maintain its viability and operational relevance throughout its long projected life, and to provide the foundation for future enhancements and new capabilities to better support the three primary benefactors of the system, the NWS, the Federal Aviation Administration (FAA), and the United States Air Force forecast and warning missions.

An overview of the R2O process, past scientific and engineering contributions as well as current R2O activities in signal processing and polarimetric techniques (many of which will be detailed in other conference presentations) will be presented.