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Potential Future Operational Benefit of Phased Array Radar
to Improve Decision Support for End Users

NOAA National Severe Storms Laboratory (NSSL) has been investigating Phased Array Radar (PAR) as a potential technology to replace the current national radar network. NSSL's PAR program provides valuable information to inform the National Weather Service's (NWS) planned 'Radar Next' Program that will, in partnership with the Office of Oceanic and Atmospheric Research (OAR) including NSSL, design and deploy the next generation of weather surveillance radar technology. PAR provides faster updates and more details about severe and nonsevere weather, which could support improved and enhanced weather warnings in the future. A dual-polarization PAR known as the Advanced Technology Demonstrator (ATD) is being used to demonstrate PAR technology as one potential option for the future radar network.

This showcase summarizes what has been learned from studying storms with PAR technology, the potential benefits PAR offers to NWS forecasters and its deep core partners including EMs, and future research activities to strengthen the case for operationalizing PAR. Initial results from Hazardous

Weather Testbed activities exploring the impacts of PAR data-including faster updates and more dense observations through the depth of a storm-on forecasters' decisions will also be shared. These efforts combined with feedback and conversations with other radar data users, such as emergency managers, will help the NWS decide which option is best suited to replace the current weather radar network.

Presentation Theme: Impact of future technology on EM decision making

Collaborators, Advisor(s) and Department(s) that assisted with this research: Anthony Reinhart, NOAA/OAR/NSSL Addison Alford, NOAA/OAR/NSSL Larry Hopper, NOAA/OAR/NSSL