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NCAR/RAL and DTC
Oral
(Virtual Talk)
Verification and diagnostic activities are critical for the success of both numerical weather prediction and weather forecasting efforts at organizations around the world. Having reproducible results via a consistent framework is equally important for model developers and users alike. The enhanced Model Evaluation Tools (METplus) system is an umbrella verification, validation and diagnostic tool for use by thousands of users from both US and international organizations. The METplus framework has been developed with a view towards providing a consistent platform delivering those reproducible results. The tools are designed to be highly flexible to allow for quick adaption to meet additional evaluation and diagnostic needs. A suite of python wrappers facilitate a quick set-up and implementation of the system, and to enhance the pre-existing plotting capabilities. Recently, several organizations within the National Oceanic and Atmospheric Administration (NOAA), the United States Department of Defense (DOD), and international partnerships such as Unified Model (UM) Partnership led by the Met Office have adopted the tools for their use both operationally and for research purposes. Many of these organizations are also now contributing to METplus development, leading to a more robust and dynamic framework for the entire earth system modeling community to use.

This presentation will demonstrate several examples of how METplus has been used to evaluate clouds. It will highlight examples of the flexible configurability of METplus to address a range of temporal (hourly forecasts to subseasonal-to-seasonal) and spatial scales (convection allowing to mesoscale, regional to global, and tropical). It will also briefly discuss current challenges and what some next steps might be.
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DoD Cloud Post-Processing and Verification Workshop
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