

## **Process-Oriented Diagnostics to Inform Model Development**

Jim Kinter, George Mason University

Eric Maloney, Colorado State University

Justin Sheffield, Princeton University

Annarita Mariotti, National Oceanic and Atmospheric Administration

As a result of the collaborative analysis conducted by the CMIP5 North American Climate Task Force – sponsored by the National Oceanic and Atmospheric Administration (NOAA), Climate Program Office (CPO), Modeling, Analysis, Prediction and Projection (MAPP) program – the development of process-oriented diagnostics that can more directly inform climate model development is being discussed. The Task Force performed a rigorous analysis of the simulations of 20<sup>th</sup> century climate and projections of 21<sup>st</sup> century climate that were produced for the Coupled Model Intercomparison Project, fifth round (CMIP5), which resulted in the publication of 22 research papers and 3 synthesis papers in a special collection in the *Journal of Climate*. Following up on that analysis, several discussions were initiated with modeling groups in the U.S. and abroad to define and compute more process-specific metrics that could be used to advise model developers more specifically about the relevant processes represented in climate models. This presentation will provide the background and describe the current status of those discussions.