

SESSION: (B2) Modelling issues in S2D prediction

(B2-02)

Process-Oriented Model Diagnosis to Improve Modeling Systems

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The NOAA Model Diagnostics Task Force has led an activity since 2016 to produce a community-designed, flexible software package that integrates process-oriented metrics for model evaluation. Process-oriented metrics in this case are model diagnostics that go beyond evaluation of raw performance of a model and provide physical insight into the sources of major biases in models. The desired end result is pathways to improve model performance via process-focused diagnosis of model error. The effort has been led by NCAR, GFDL, and academic community scientists, and a broad array of diagnostics have been contributed to the software package from a diverse pool of investigators and institutions. This paper will discuss process-oriented diagnostics as a pathway to model improvement and provide an update on the Task Force's progress. Metric packages such as this one can help advance model and prediction system development, where improvements are often made in a heavily performance-oriented framework.