

James

Ridout

U. S. Naval Research Laboratory, Monterey, CA

Carolyn Reynolds, U. S. Naval Research Laboratory, Monterey, CA

Richard Allard, U. S. Naval Research Laboratory, Stennis, MS

Charlie Barron, U. S. Naval Research Laboratory, Stennis, MS

William Crawford, U. S. Naval Research Laboratory, Monterey, CA

Maria Flatau, U. S. Naval Research Laboratory, Monterey, CA

David Hebert, U. S. Naval Research Laboratory, Stennis, MS

Gregg Jacobs, U. S. Naval Research Laboratory, Stennis, MS

Matthew Janiga, U. S. Naval Research Laboratory, Monterey, CA

Tommy Jensen, U. S. Naval Research Laboratory, Stennis, MS

David Kuhl, U. S. Naval Research Laboratory, Washington, DC

Fei Liu, Science Applications International Corporation/Cherokee Nation Business

Jun Ma, U. S. Naval Research Laboratory, Washington, DC

E. Joseph Metzger, U. S. Naval Research Laboratory, Stennis, MS

Erick Rogers, U. S. Naval Research Laboratory, Stennis, MS

Clark Rowley, U. S. Naval Research Laboratory, Stennis, MS

Stephanie Rushley, U. S. Naval Research Laboratory, Monterey, CA

Jay Shriver, U. S. Naval Research Laboratory, Stennis, MS

Timothy Whitcomb, U. S. Naval Research Laboratory, Monterey, CA

Oral

The process of atmospheric forecast error reduction in the Navy Earth System

Prediction Capability system (Navy ESPC) will be presented, along with some history of the work, including challenges faced and lessons learned. Navy ESPC consists of a coupled integration of the Navy Global Environmental Model (NAVGEN), the HYbrid Coordinate Ocean Model (HYCOM), and the Los Alamos Sea Ice Model (CICE). The Wavewatch III ocean surface wave model is also included, but does not currently provide feedback to the other models. The talk will focus on NAVGEN, the atmospheric model component, which was originally developed for uncoupled NWP, and is still being run in that mode operationally at the Fleet Numerical Meteorology and Oceanography Center (FNMOC). The coupling between NAVGEN and HYCOM will also be briefly discussed. Reduction of atmospheric errors in NAVGEN for Navy ESPC has involved an iterative two-step process, including both S2S-timescale and synoptic/NWP- timescale testing and development. I will present some results of our work through this process, which has led to a Navy ESPC version 2 with both good skill in representing the Madden-Julian Oscillation, along with NWP performance on par with the operational uncoupled NAVGEN. We are currently developing version 2.1 of the system, which will be the final version before NAVGEN is replaced by the non-hydrostatic atmospheric model NEPTUNE in Navy ESPC v3, utilizing the Common Community Physics Package (CCPP).

Presentation file

[Ridout-Jim_0.pdf](#)

Meeting homepage

[S2S Community Workshop](#)

[Download to PDF](#)