

## **The Community Earth System Model: Evaluation and CMIP5 simulations. Activities of the Ocean Model Working Group**

Gokhan Danabasoglu<sup>†</sup>; Matthew Hecht; Susan Bates

<sup>†</sup> National Center for Atmospheric Research, USA

Leading author: [gokhan@ucar.edu](mailto:gokhan@ucar.edu)

The primary goals of the Ocean Model Working Group (OMWG) are to 1) advance the state-of-the-art in the capability and fidelity of the CESM ocean component in support of specific science objectives of the broad CESM effort and 2) conduct curiosity driven research with CESM to advance our understanding of the role of the oceans in the Earth system. The latter goal ensures that the OMWG, through CESM, fully contributes to advancing Earth system science, while the former is absolutely necessary to keep the CESM at the leading edge of ocean climate models. The OMWG members have recently focused on the newly completed and released CMIP5 simulations, using the Community Climate System Model version 4 (CCSM4). Specific subjects of interest include mean biases, variability, and trends in air-sea fluxes and sea surface temperatures; variability of the Atlantic meridional overturning circulation; tropical Atlantic Ocean variability; El Niño Southern Oscillation characteristics; the Southern Ocean and its climate; and projected 21st Century changes in the ocean. In addition, the OMWG is working on new features, developments, and design of the next generations of the CESM ocean component.