



Simulation of the Arctic Ocean and its sea ice cover

A. K. Turner (1), D. Feltham (1,2) and S. Laxon (1)

(1) Centre for Polar Observation and Modelling, Department of Earth Sciences, University College London, London, UK, (2) British Antarctic Survey, Cambridge, UK

We present preliminary simulations of the Arctic Ocean and sea ice cover from a newly coupled, sea-ice/ocean model. The sea ice component is the Los Alamos CICE model version 4, and the ocean component is OPA version 9. The simulations are compared with previous simulations using a stand-alone sea ice model and insight is gained into the sensitivity of the sea ice model to the treatment of the ocean. The simulation results from the coupled model are compared to estimates of basin-wide sea ice thickness obtained from satellite altimetry and sea ice extent, and the ocean circulation pattern is described and discussed in light of previous hydrographic surveys.