



ACCESS: The Australian Community Climate and Earth System Simulator

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The Australian Community Climate and Earth System Simulator (ACCESS) will be a state-of-the-art, fully-coupled earth system model. Being developed as a joint initiative between the Commonwealth Scientific and Industrial Research Organisation (CSIRO), the Bureau of Meteorology and the Australian universities, the model will be used for both climate research and numerical weather prediction.

ACCESS represents a trend in earth system modelling towards models which are increasingly complex, and which are increasingly modular in nature. It is built around the OASIS coupler, with the core components comprising the atmospheric model HadGAM3, the ocean model MOM4p1 and the sea ice model CICE4. Other components include the terrestrial model CABLE (CSIRO Atmosphere Biosphere Land Exchange), the vegetation model LPJ, and modules for atmospheric chemistry and oceanic biogeochemistry. Ultimately, it is intended to incorporate socio-economic processes as well.

This presentation will describe the structure of ACCESS. Particular emphasis will be paid to the physical and technical aspects of the coupling between the component models, and to the challenges presented by the construction of such a comprehensive earth system model.