

## Coordinated Ocean-ice Reference Experiments (CORE-II): Ocean Model Intercomparison Project (OMIP)

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The Ocean Model Intercomparison Project (OMIP) aims to provide a framework for evaluating, understanding, and improving the ocean, sea-ice, tracer, and biogeochemical (BGC) components of global climate and earth system models contributing to CMIP6. Thus, OMIP includes the previously separate Ocean Carbon Model Intercomparison Project (OCMIP). OMIP addresses its aims in two complementary manners: (i) by providing a protocol for ocean diagnostics (including ocean physics, inert chemical tracers, and biogeochemistry) to be saved as part of CMIP6, and (ii) by providing an experimental protocol for global ocean –sea-ice models run with a prescribed atmospheric forcing. The OMIP diagnostic protocol is relevant for any ocean model component of CMIP6, including the DECK, historical simulation, idealized and realistic anthropogenic greenhouse gas increases, C4MIP, and FAFMIP. The physical portion of the OMIP experimental protocol follows that of the interannual Coordinated Ocean-ice Reference Experiments (CORE-II). Since 2009, CORE has become the standard method to evaluate global ocean –sea-ice simulations and to examine mechanisms for forced ocean climate variability. The inert chemical tracer portion of OMIP is based on the OCMIP2 protocol, while the BGC portion uses the OCMIP3 protocol, with each participating group using their own prognostic ocean BGC model.

Keywords: CORE-II, OMIP, CMIP6, OGCM

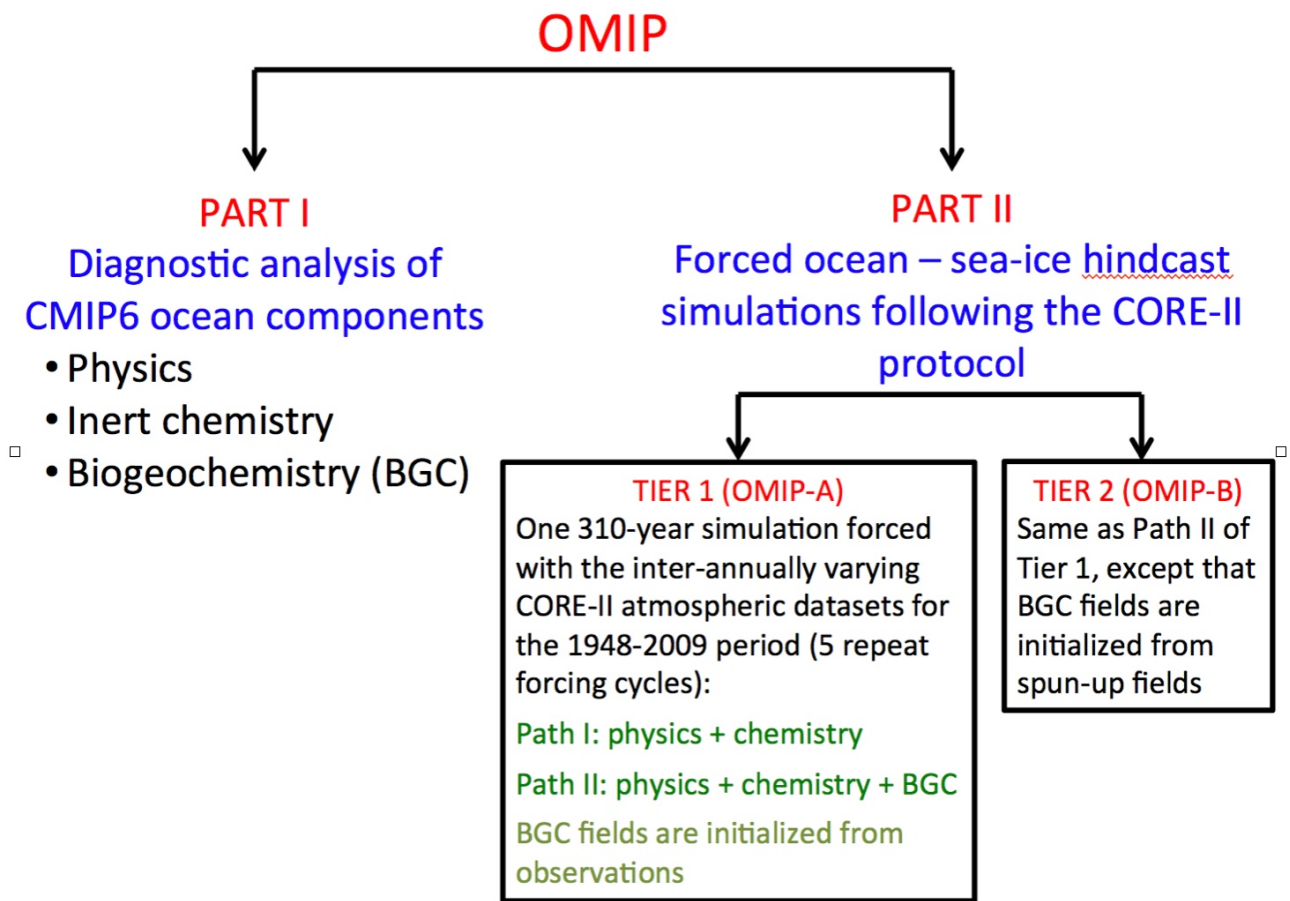


Figure 1. Schematic of OMIP overview. In the spirit of AMIP, OMIP can be considered as part of future DECK experiments. Note that OMIP is independent of any particular CMIPX.