



Assessment of DRAKKAR global simulations using hydrographic data: methods and impact of model resolution

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The international DRAKKAR group is building a hierarchy of ocean/sea-ice models to simulate and study dynamical processes involved in the oceanic variability and scale interactions over the period 1958-2007. Global simulations ($1/4^\circ$, $1/2^\circ$, 1° , 2°) have been performed, driven through bulk formulae by a hybrid (reanalysed and observed) surface forcing function built over this period.

Temperature and salinity fields from these 4 simulations are collocated onto, then quantitatively evaluated against, the ENACT-ENSEMBLES T/S profile database (hydrographic sections, CTD, XBT, moored buoys, Argo floats) over the period 1956-present. The spatial and temporal structures of simulated biases are then evaluated to reveal model weaknesses. This assessment procedure will be described, then we will discuss the benefits of resolution increases and forcing choices on simulated thermohaline properties.