



Future high-resolution dynamic sea level changes

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To assess the quality of future dynamic sea level projections using strongly eddying ocean models it is essential to investigate the impacts of different forcing data sets on modeled sea level change. We here investigate the sensitivity of ocean flows as modeled by the strongly eddying global version of the Parallel Ocean Program (POP) to different atmospheric forcing conditions. An ensemble of POP model simulations is performed that is forced by monthly mean atmospheric fluxes derived from an ensemble simulation with the ECHAM5-OM1 model (within the ESSENCE project, see www.knmi.nl/~sterl/Essence/). The results on dynamical sea level changes are compared with those in a control run using a reference (CORE1, see <http://www.clivar.org/organization/wgomd/resources/core/core-i>) forcing data set. Focus is on specific regional differences in sea level arising from changes in the Atlantic meridional overturning circulation.