On the initialization of realistic high-resolution ocean models

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In the context of multi-year to decadal simulations of ocean circulation at resolutions that allow for mesoscale eddies, it is anticipated that with data assimilation, the large scales of the initial state can be reasonably estimated and that such initializations may help better represent longer time scale variability. Towards better understanding the consequences and limitations of such an initialization, we report on preliminary numerical experiments on the interaction of small scales and large scales in the POP (Parallel Ocean Program) ocean general circulation model.