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An eddy-resolving model of the Global Ocean

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We present results of eddy-resolving simulation of the global ocean with INM-IO general circulation model. The global grid employs tripole layout, has 0.1-degree horizontal resolution, and uses 49 vertical levels. The ocean model coupled with sea ice and atmospheric boundary layer sub-models. We address to the problem of effective implementation of the numerical code on parallel computers. The model was developed in the Institute of Numerical Mathematics (INM) and P.P.Shirshov Institute of Oceanology (IO).
The global simulations were performed with atmospheric conditions based on repeat annual cycle of the normal year - CORE dataset. We present an overview from 75-year spinup. The model results are quite good when compared to observations. We discuss the results of sensitivity of AMOC to the fresh water input due to Greenland ice sheet melting.