Convergence Tests for MPAS-Ocean

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Here we show a number of convergence tests with analytic solutions and verifiable metrics. They are implemented in the MPAS repo for the ocean core, and can be automatically created and run with the COMPASS tools. Convenient, precise tests of the different parts of the model are crucial to regular testing. This includes testing of individual terms in each prognostic equation, spatial operators, and time stepping schemes. Test cases of the barotropic mode of ocean split time-stepping scheme will be highlighted.