



Model study of the Labrador Sea variability at interannual and decadal time scales

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Eddy permitting model study of the Labrador Sea interannual and interdecadal variability from 1948 to 2005 is present. The NEMO coupled sea-ice ocean model is used in this study, which is implemented for the region of the North Atlantic with 1/4 degree horizontal resolution and 46 vertical levels. The surface atmospheric forcing is calculated with NCEP atmospheric reanalysis. Variability of the surface momentum, heat and water fluxes for the period of simulations is presented. It's relation to the dominant atmospheric pattern in the North Atlantic is discussed. Water mass characteristics and water transport in the Labrador Sea and their interannual and interdecadal variability are studied. Energetic analysis of mean and eddy flows is used to explain the mechanism of formation of long-term variability in the model solution.