



Recent climatic changes in the marine Arctic

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New oceanographic, sea ice and atmospheric data collected through 2007 point to extension of warming in the marine Arctic. Oceanographic data point to continuation of the Atlantic Water temperature increase in the Arctic Ocean. It is meant that the Arctic part of the thermohaline conveyor belt is not decay but forced. Together with accelerating decrease of the summer sea ice extent (SIE) in the Arctic the summer ice extent in the marginal arctic seas is decreased too. The negative trends of September SIE in the Arctic seas are stronger during last 30 years in comparison to first three decades (1924-1953), excluding the Kara Sea. The surface air temperature (SAT) changes in the marine Arctic show the fast decrease of negative SAT sums and increase of summer positive SAT sums starting in 1995 through the absolute record in 2007. These changes are consistent with accelerated shrinking of sea ice. Recent changes in the atmosphere and ocean are compared with ones during first half of 20th century. The studies has been supported by the Russian Fund for Basic Research (project 06-05-64054)