

# Arctic Ocean waters warm suddenly

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Water flowing from the North Atlantic Ocean into the Arctic provides evidence that the Arctic Ocean is warming, according to U.S. and European researchers.

Igor V. Polyakov and colleagues at the International Arctic Research Center at University of Alaska-Fairbanks measured the temperature, salinity and velocity of the Atlantic Water, a warm, salty layer -- 500 to 3,000 feet -- of ocean water that flows through the Norwegian Sea into the Arctic Ocean.

The temperature of the Atlantic Water entering the Arctic Ocean increased dramatically in 2004, warming in two abrupt stages in February and August says Polyakov. The anomalously warm water is currently flowing along the basin margins toward the interior of the Arctic Ocean.

The authors suggest that enhanced westerly winds in the North Atlantic pushed warm water into the Norwegian Sea, and from there it flowed into the Arctic Ocean.

The study, published in *Geophysical Research Letters*, found the winds are due to changes in atmospheric conditions, but the authors say more evidence is needed to determine if the associated warming is the result of long-term change or part of a recurrent climate cycle.

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