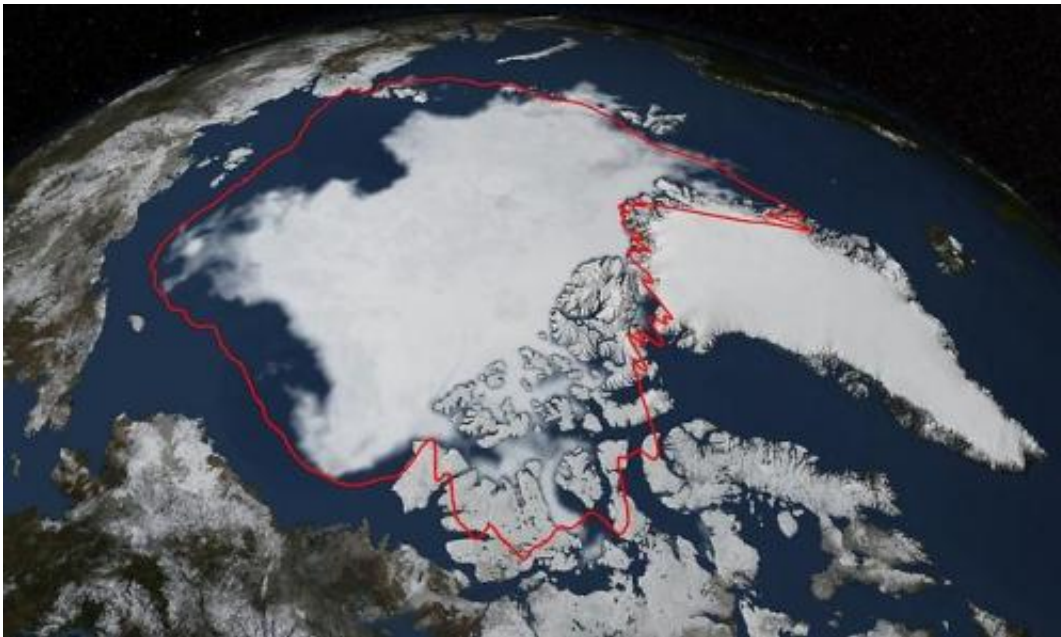


## 2014 Arctic sea ice minimum sixth lowest on record (Update)

September 22 2014

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Arctic sea ice hit its annual minimum on Sept. 17, 2014. The red line in this image shows the 1981-2010 average minimum extent. Data provided by the Japan Aerospace Exploration Agency GCOM-W1 satellite. Credit: NASA/Goddard Scientific Visualization Studio

Arctic sea ice coverage continued its below-average trend this year as the ice declined to its annual minimum on Sept. 17, according to the NASA-supported National Snow and Ice Data Center (NSIDC) at the University of Colorado, Boulder.

Over the 2014 summer, Arctic sea ice melted back from its maximum extent reached in March to a coverage area of 1.94 million square miles (5.02 million square kilometers), according to analysis from NASA and NSIDC scientists. This year's minimum extent is similar to last year's and below the 1981-2010 average of 2.40 million square miles (6.22 million square km).

"Arctic sea ice coverage in 2014 is the sixth lowest recorded since 1978. The summer started off relatively cool, and lacked the big storms or persistent winds that can break up ice and increase melting," said Walter Meier, a research scientist at NASA's Goddard Space Flight Center in Greenbelt, Maryland.

"Even with a relatively cool year, the ice is so much thinner than it used to be," Meier said. "It's more susceptible to melting."

This summer, the Northwest Passage above Canada and Alaska remained ice-bound. A finger of open water stretched north of Siberia in the Laptev Sea, reaching beyond 85 degrees north, which is the farthest north open ocean has reached since the late 1970s, according to Meier.

While summer sea ice has covered more of the Arctic in the last two years than in 2012's record low summer, this is not an indication that the Arctic is returning to average conditions, Meier said. This year's minimum extent remains in line with a downward trend; the Arctic Ocean is losing about 13 percent of its sea ice per decade.

To measure sea ice extent, scientists include areas that are at least 15 percent ice-covered. The NASA-developed computer analysis, which is one of several methods scientists use to calculate extent, is based on data from NASA's Nimbus 7 satellite, which operated from 1978 to 1987, and the U.S. Department of Defense's Defense Meteorological Satellite Program, which has provided information since 1987.

In addition to monitoring sea ice from space, NASA is conducting airborne field campaigns to track changes in Arctic sea ice and its impact on climate. Operation IceBridge flights have been measuring Arctic sea ice and ice sheets for the past several years during the spring. A new field experiment, the Arctic Radiation – IceBridge Sea and Ice Experiment (ARISE) started this month to explore the relationship between retreating sea ice and the Arctic climate.

Provided by NASA's Goddard Space Flight Center

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