

16 September 2011 Last updated at 10:23 GMT

## Arctic ice hits second-lowest level, US scientists say



The minimum level of cover is far below the average of 1979-2000

Sea ice cover in the Arctic in 2011 has passed its annual minimum, reaching the second-lowest level since satellite records began, US scientists say.

The National Snow and Ice Data Center (NSIDC) says [the minimum, reached on 9 September, was 4.33 million sq km.](#)

That value is 36% lower than the average minimum for 1979-2000.

NSIDC said the figure was preliminary, and that "changing winds could still push the ice extent lower" before final numbers are published in early October.

The preliminary value is 160,000 sq km - or 4% - above the record minimum seen in 2007.

"While the record low year of 2007 was marked by a combination of weather conditions that favoured ice loss - including clearer skies, favourable wind patterns and warm temperatures - this year has shown more typical weather patterns but continued warmth over the Arctic," they wrote.

"This supports the idea that the Arctic sea ice cover is continuing to thin."

NSIDC director Mark Serreze said: "Every summer that we see a very low ice extent in September sets us up for a similar situation the following year.

"The Arctic sea ice cover is so thin now compared to 30 years ago that it just can't take a hit any more. This overall pattern of thinning ice in the Arctic in recent decades is really starting to

catch up with us."

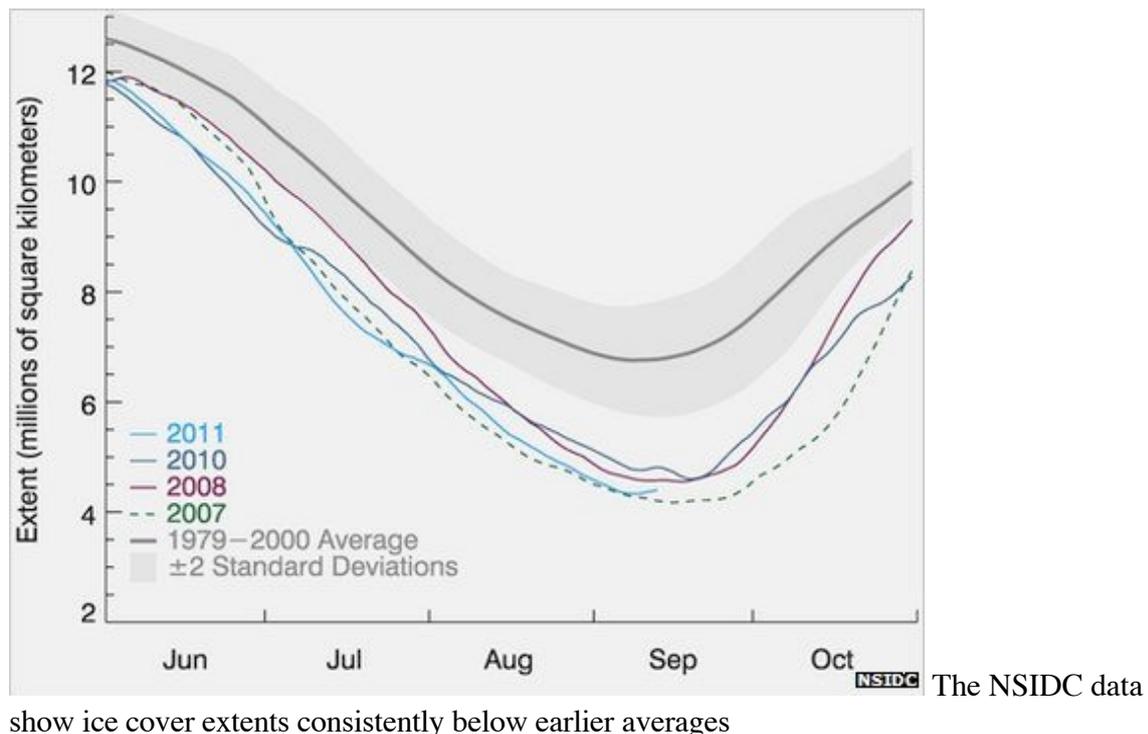
In fact, an analysis released last week by researchers at the University of Bremen in Germany, who use a different satellite to assess ice cover, indicated that 2011's minimum was the lowest on record.

However, there is some controversy surrounding the result; the Bremen team's higher-resolution data can detect small patches of water where the NSIDC team would not, but the Bremen record goes back only to 2003.

These analyses are for the extent, or area, of Arctic ice, but recent estimates released by the University of Washington's Polar Science Center give an indication of the total amount of sea ice.

[Their data indicate](#) that the ice volume is at an all-time low for the second year in a row.

Analyses of Arctic ice in recent years consistently indicate a change in the nature of the ice itself - from one solid mass that melts and freezes at its edges towards more dispersed, piecemeal ice cover, and from robust "multi-year" ice toward seasonal floes that melt more easily.



show ice cover extents consistently below earlier averages

## Arctic ice falls to near record low

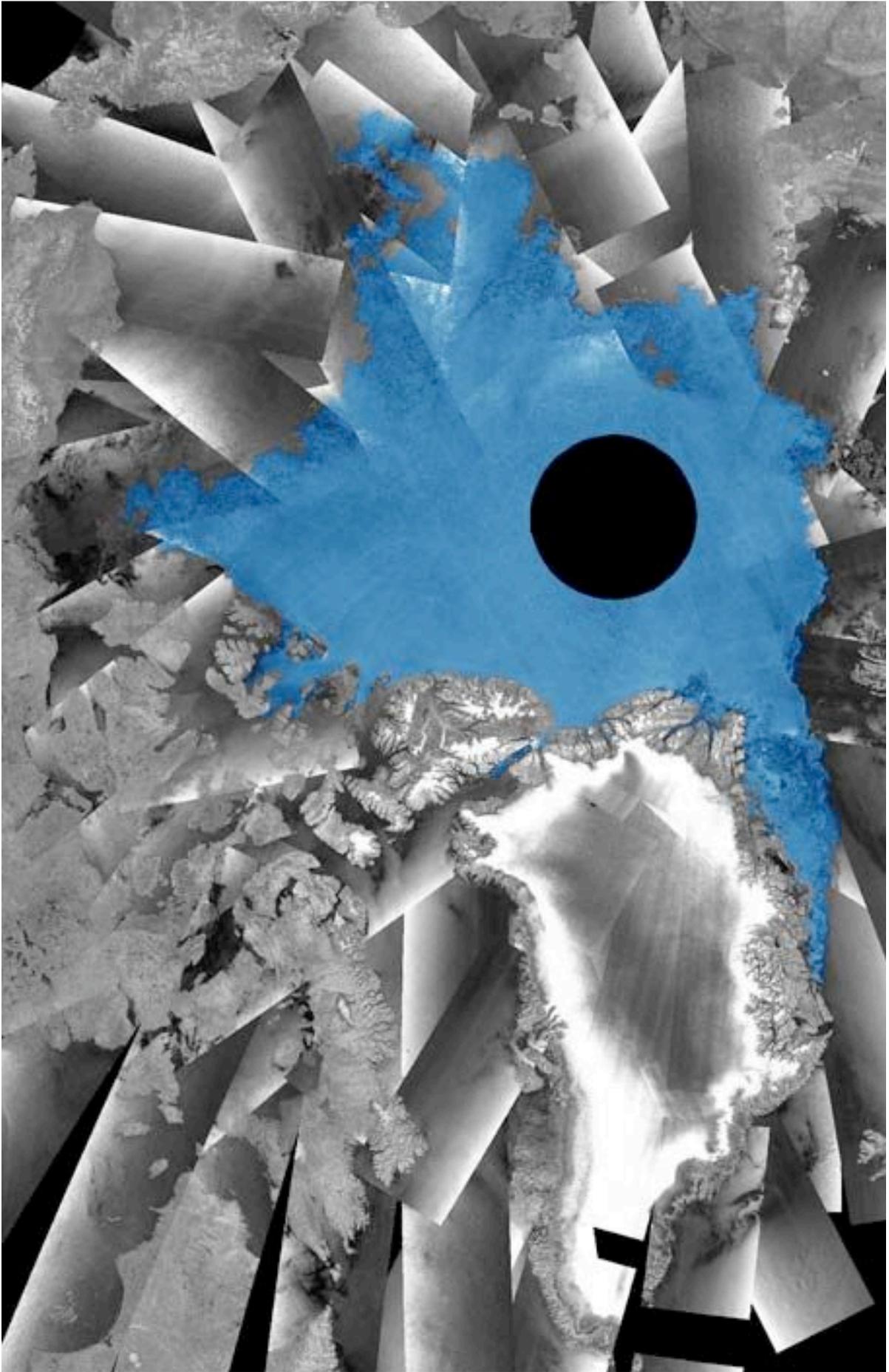
20:46 20 September 2011

[Environment](#)

[Picture of the day](#)

*Caitlin Stier, video intern*







*(Image: ESA/DMI/NIC)*

This mosaic of satellite images over the Arctic Ocean shows ice levels nearing a [record low set in 2007](#). Acquired from the European Space Agency's radar satellite [Envisat](#) ASAR, the blue areas represent regions where ice accounts for more than 80 per cent of the sea surface. ASAR captured the high resolution images over the course of three days beginning 9 September. The satellite's radar penetrates the obscuring effects of the Arctic's frequent dark hours and thick cloud cover.

Sea ice levels have plummeted since 1979, when satellite records of conditions in the Arctic began. By the 1980s, minimum ice levels observed at the end of each summer had already fallen 50 per cent.

The past five years have seen the five lowest levels on record. According to the National Snow and Ice Data Center in Boulder, Colorado, this year's minimum ice extent is 4.33 million square kilometres, just 160,000 square kilometres above the 2007 level. However, a team of researchers at the University of Bremen in Germany have come up with [a separate estimate](#) using a microwave sensor on board NASA's Aqua satellite. They suggest sea ice extent may have shrunk beyond 2007's minimum extent to an all-time low.