



ANTARCTIC SCIENCE NEWS



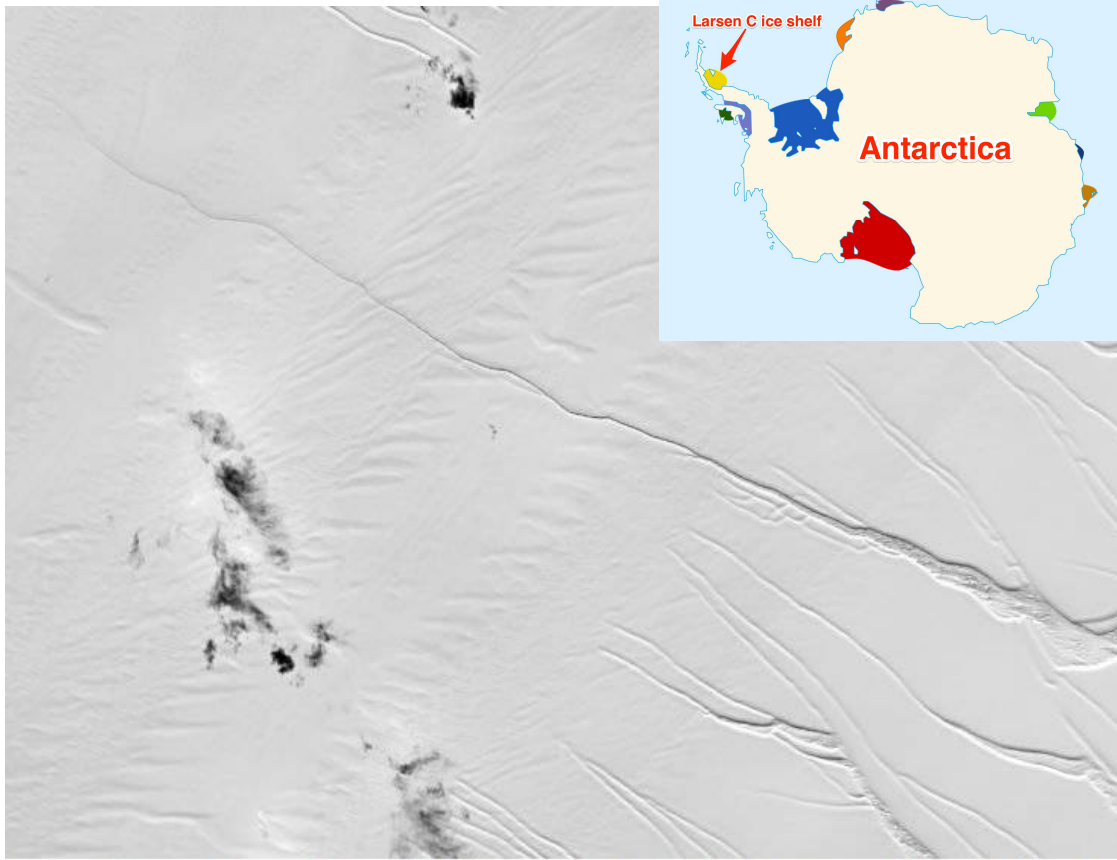
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Giant iceberg - 5 000 square kilometers - set to calve from Larsen C Ice Shelf, Antarctica

Summary: A huge iceberg looks set to break away from the Larsen C ice shelf on the Antarctic Peninsula. Satellite observations (European Sentinel satellites) from December 2016 show a growing crack in the ice shelf which suggests that an iceberg with an area of up to 5,000 square kilometers is likely to calve soon.



The crack through Larsen C ice shelf is visible as a dark line from bottom right to top left of this satellite image. Image captured on 26 October 2016.

A huge iceberg looks set to break away from the Larsen C ice shelf on the Antarctic Peninsula. Larsen C is more than twice the size of Wales. Satellite observations from December 2016 show a growing crack in the ice shelf which suggests that an iceberg with an area of up to 5000 square kilometers is likely to calve soon.

British Antarctic Survey researchers have a long running research programme to monitor ice shelves from both above and below to understand the causes and implications of the rapid changes observed in the region.

During the current Antarctic field season, a glaciology research team has been on Larsen C using seismic techniques to survey the seafloor beneath the ice shelf. Because a break up looks likely the team has not set up camp on the ice as usual. Instead they have made field trips by twin otter aircraft supported from Rothera Research Station.

Ice shelves in normal situations produce an iceberg every few decades. There is not enough information to know whether the expected calving event on Larsen C is an effect of climate change or not, although there is good scientific evidence that climate change has caused thinning of the ice shelf. Once the iceberg has calved the big question is whether the entire ice sheet may collapse. This is something that British Antarctic Survey teams have been monitoring and why glaciologists were deployed to work on Larsen C in the past few weeks.

Glaciologist Professor David Vaughan OBE, Director of Science at British Antarctic Survey, said, The calving of this large iceberg could be the first step of the collapse of Larsen C ice shelf, which would result in the disintegration of a huge area of ice into a number of icebergs and smaller fragments.

About ice shelves

An ice shelf is a floating extension of land-based glaciers which flow into the ocean. Because they already float in the ocean, their melting does not directly contribute to sea-level rise. However, ice shelves act as buttresses holding back glaciers flowing down to the coast. Larsen A and B ice shelves, which were situated further north on the Antarctic Peninsula, collapsed in 1995 and 2002, respectively. This resulted in the dramatic acceleration of glaciers behind them, with larger volumes of ice entering the ocean and contributing to sea-level rise.

Source: British Antarctic Survey