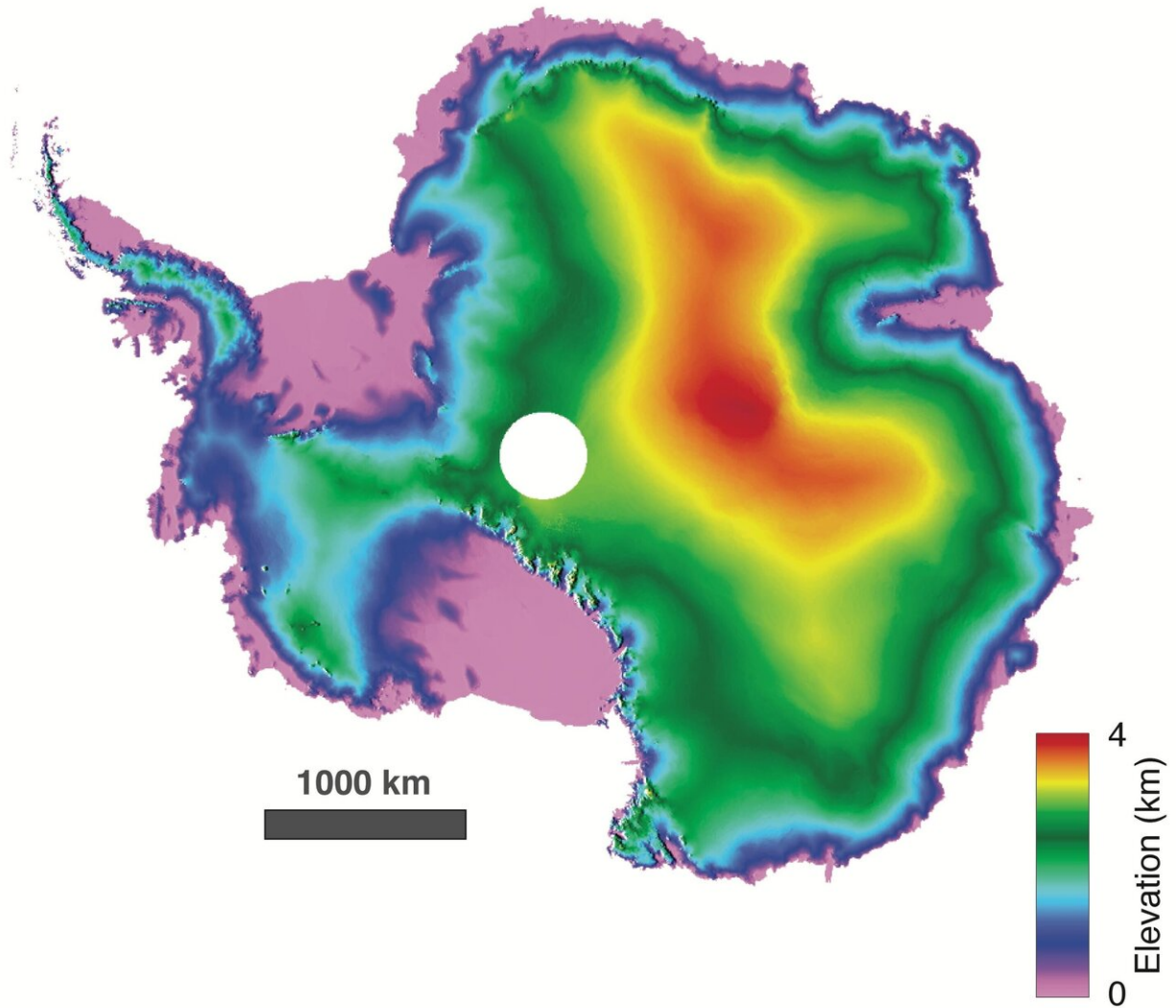


# Image: Antarctica detailed in 3-D

May 14 2019

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Credit: University of Edinburgh

Unfortunately ice is a hot topic when it comes to understanding and monitoring how this fragile component of the Earth system is being affected by climate change. Scientists, therefore, go to great lengths to study changes happening in the remote icy reaches of our planet – a subject that is being discussed in detail at this week's Living Planet Symposium in Italy. Among the results being presented is a novel 3-D dataset of Antarctica. Scientists from the University of Edinburgh, UK, created this new view by processing data from ESA's CryoSat in a clever way.

CryoSat carries a radar altimeter that measures the height of the world's ice. Typically, the data are used to map the height of ice at single points. And, since it was launched in 2010, this has revealed much about how ice sheets, glaciers and sea ice are changing.

Nevertheless, a technique called 'swath processing' takes the data to a new level. Scientists have used CryoSat's novel 'interferometric mode' to produce whole swaths of data and in much finer detail and faster than is gained by conventional radar altimetry. The usual spatial resolution of a few kilometres has been improved to less than one kilometre.

The technique is allowing [scientists](#) to better understand change and predict how ice sheets, glaciers and ice caps may behave as [climate change](#) takes a stronger grip. This is important with respect to global concerns such as sea-level rise.

Provided by European Space Agency

Citation: Image: Antarctica detailed in 3-D (2019, May 14) retrieved 26 June 2024 from <https://phys.org/news/2019-05-image-antarctica-d.html>

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