

Remote Sensing in Antarctica



Earth Observation Technology Cluster



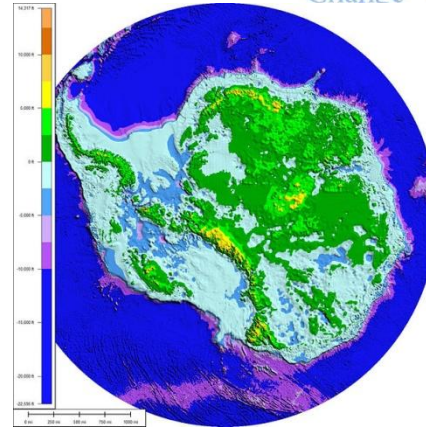
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Important components

- Ice sheet (grounded)
- Ice shelf (floating)
- Ice streams and glaciers
- Sea ice and icebergs
- Subglacial environment
- Snow cover
- Ice free areas and Permafrost
- Submarine landscapes

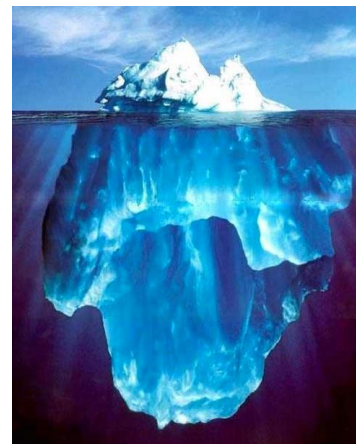
IceSat
ASTER
Glacier
Radar
Polar
Scientists
Cryosphere
Earth
Imaging
Reading
July 2011
Modelling
Ice
ESA
Observation
Green
Club
Lidar
Sensing
Photogrammetry
Change
Melting
Ocean
CryoSat



Author: Paul V. Heinrich



Source: BAS



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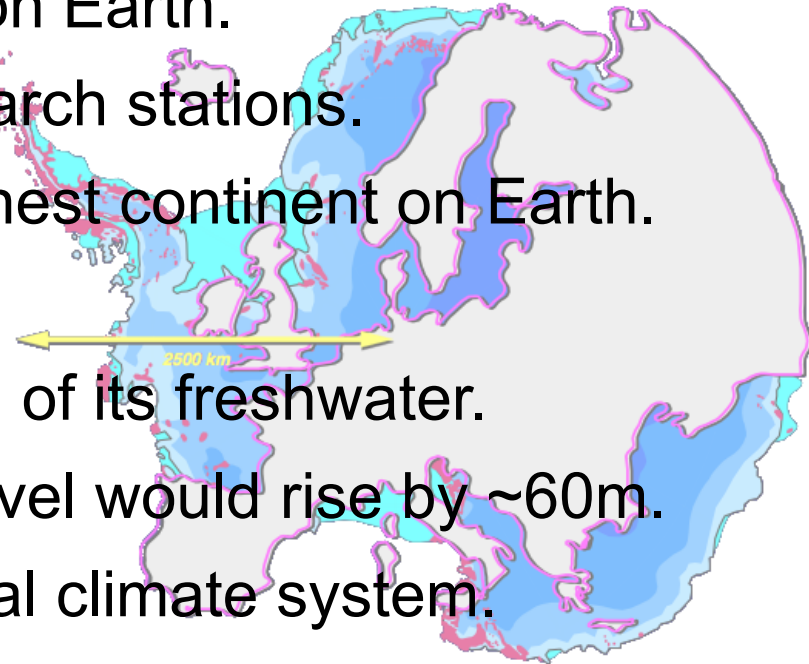


UK POLAR NETWORK

Antarctica ...

CryoSat
Ocean
Photogrammetry
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Climate
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- ... is the latest discovered continent on Earth.
- ... has no inhabitants, but hosts research stations.
- ... is the coldest, driest, windiest, highest continent on Earth.
- ... is 98 % covered by ice and snow.
- ... contains 90% of Earth's ice & 70% of its freshwater.
- ... if entirely melted, the global sea level would rise by ~60m.
- ... plays an important role in the global climate system.



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Antarctica is changing



Movie of Larssen B ice shelf collapse

<http://www.spri.cam.ac.uk/research/projects/larseniceshelf/>

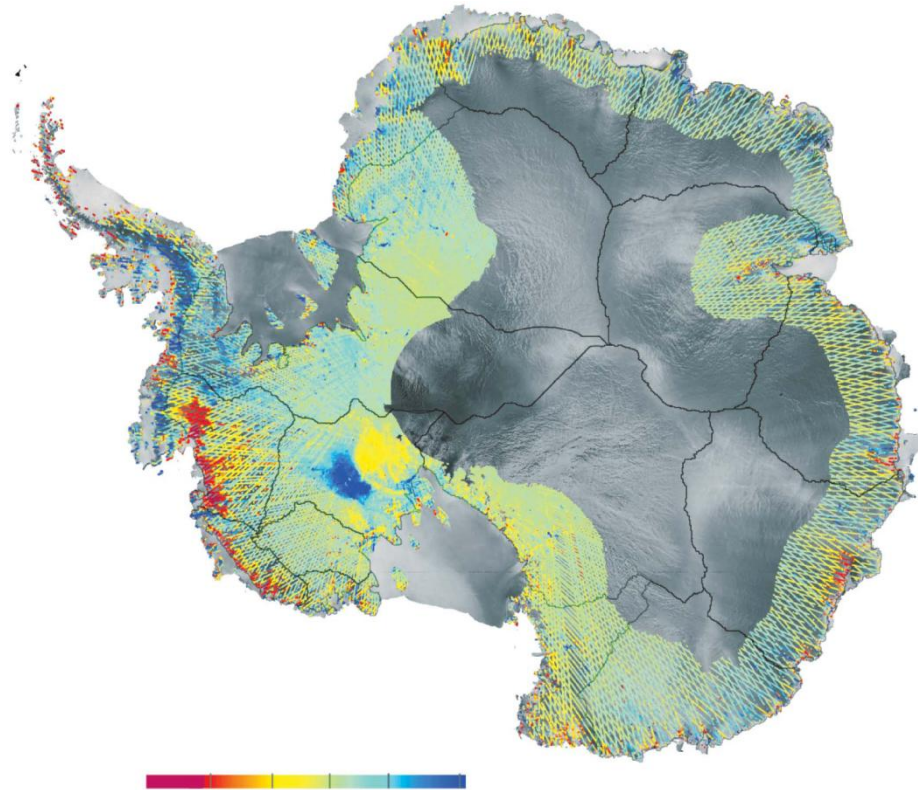


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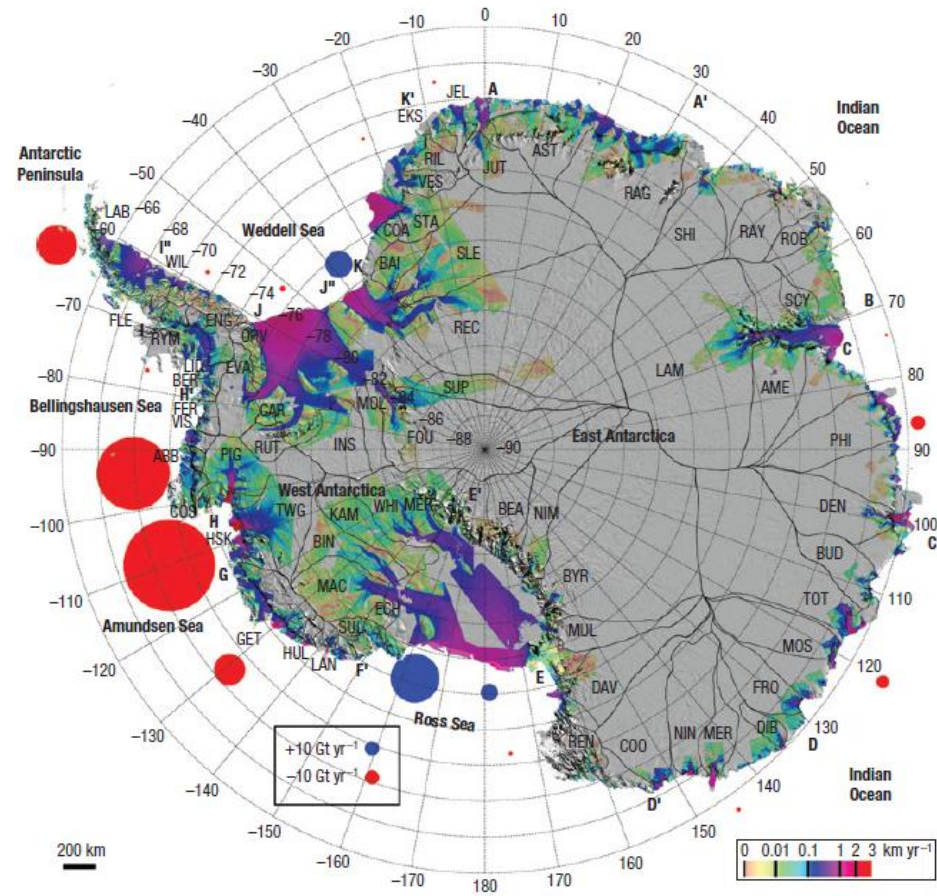
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Antarctica is changing

CryoSat Ocean
IceSat
ASTER
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Radar
Polar Scientists
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Melting
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Source: Pritchard et al., 2009



Rignot et al., 2008



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