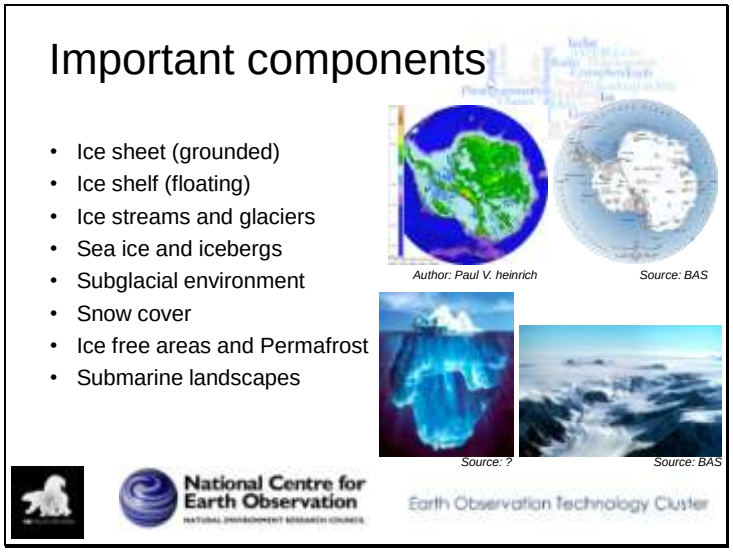
Slide 1

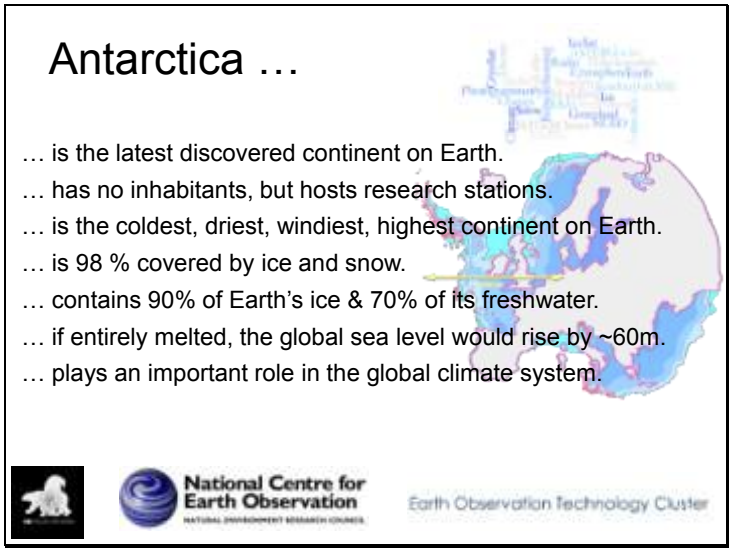

Remote Sensing in Antarctica
Earth Observation Technology Cluster
National Centre for Earth Observation

Slide 2



Important components to research at a polar environment are amongst others ice sheets, shelves, and streams, glaciers, sea ice, snow, but also the ice free areas, permafrost, and the bedrock below the snow and the ice, and not to forget the submarine landscapes. Antarctica is a place where we can research all these components and the interactions between them. Moreover, some of these components can only be found in Antarctica, e.g. ice sheets below sea level (see images at top). What else is so special about Antarctica? …

Slide 3

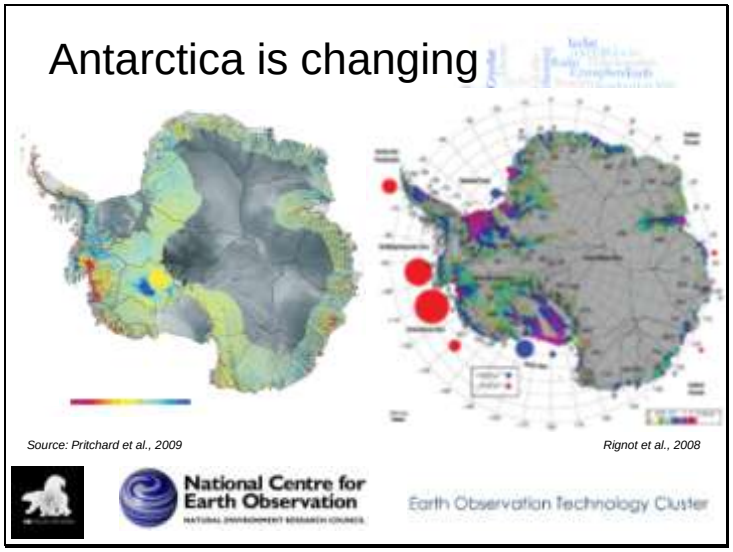


Source of the figure: Wikimedia, Author: Hannes Grobe, Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany

Slide 4

Some more info about the 2002 collapse, the consequences such as huge icebergs, but also new opportunities for research such as geology and the marine biology below the ice shelves…

Slide 5



Satellite observations are known to provide wide/large scale information about the Earth, but also about other planets. Specially in Antarctica, with its hostile climate and remote location, satellite observations are of utmost importance. Here you can see 2 examples of products of satellite remote sensing. It demonstrates how changes of the Antarctic continent can be measured by means of different remote sensing techniques. To the left altimetry data from the icesat satellite is used to measure changes in the height of the Antarctic surface. To the right radar data is used to determine the velocity of ice streams, galciers, and ice shelves.