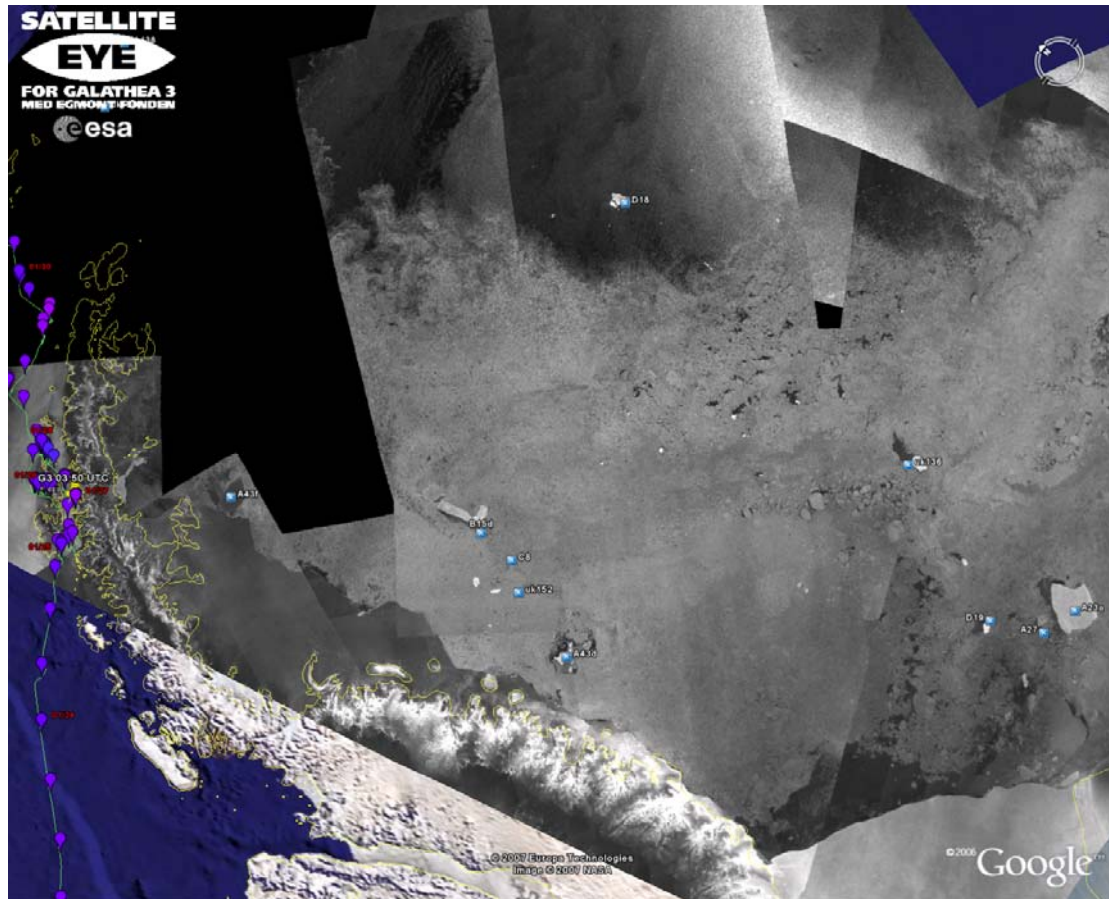


Icebergs near Antarctica



A radar image from ESA's ENVISAT satellite that shows the ice in the Weddell Sea east of the Antarctic peninsula. The image is composed of satellite recordings from the 29, 30, and 31 of January 2007. It is recommended to view the 'Large image'.

In the far left is seen the route of Galathea 3 west of the Antarctic peninsula. Here there is hardly any sea ice except a few small icebergs.

In the bottom right is seen the floating glacier Ronne ice shelf that enters the Weddell Sea with a glacier front of around 450 km. In the far right is seen a huge iceberg (A23a) that measures more than 60 by 60 kilometer, thus is similar in size to Fyn!

The large icebergs around Antarctica are registered by the National Ice Centre in Washington, and they are given name with a defined system. An iceberg with a name that starts with the letter A is fed from an area between 0 degrees and 90 degrees westerly longitude (you can see A23a, A43d and A27). The number after the first letter is the counting number (a lower number is calved earlier). If the iceberg later on breaks into more pieces the parts are followed by a small letter (a, b, c,...). A23a



therefore is only part of the original A23 iceberg. In case the name starts with uk it means that the origin of the iceberg is unknown.

Note also the iceberg B15d that was feed in the Ross Sea at the opposite site of Antarctica more than 6 years ago and that it has traveled more than half the distance around the continent. B15 was for several years the largest iceberg in the world and it has measured more than 120 km in length. Now is broken into several parts some of which are still in the Ross Sea whereas others have traveled more than 10.000 kilometer. There is a coastal sea current moving anti-clockwise around most of Antarctica, and when an iceberg is captured by this current it can be moved very far, particularly in the summer. In the winter most icebergs are frozen into the sea ice and then they move very slowly or not at all.

Technical information:

The image is from the radar instrument ASAR on the ESA ENVISAT satellite and it is combined from all radar recordings in the period 29 to 31 January 2007.

Most of the icebergs are brighter than the surrounding sea ice in the radar images. This is because the radar signal (microwaves) penetrates the freshwater ice from where it is backscattered strongly when the iceberg is cold. Please note however the iceberg A43f that is in the area near the Antarctic peninsula in the middle left. This iceberg is darker than the surroundings. This is because it is located in a much warmer climate (surrounded by ocean) and therefore the melting of the surface is well progressed. In this case the radar signal is absorbed by the ice and then relatively little microwave radiation is backscattered to the satellite.

The data are collected and processed by the Danish National Space Centre – DTU, <http://spacecenter.dk/>

Read more about the topic at the Satellite Eye for Galathea 3 project "Radar detects sea ice and icebergs".

http://galathea3.emu.dk/satelliteeye/casestudies/radar3/index_uk.html