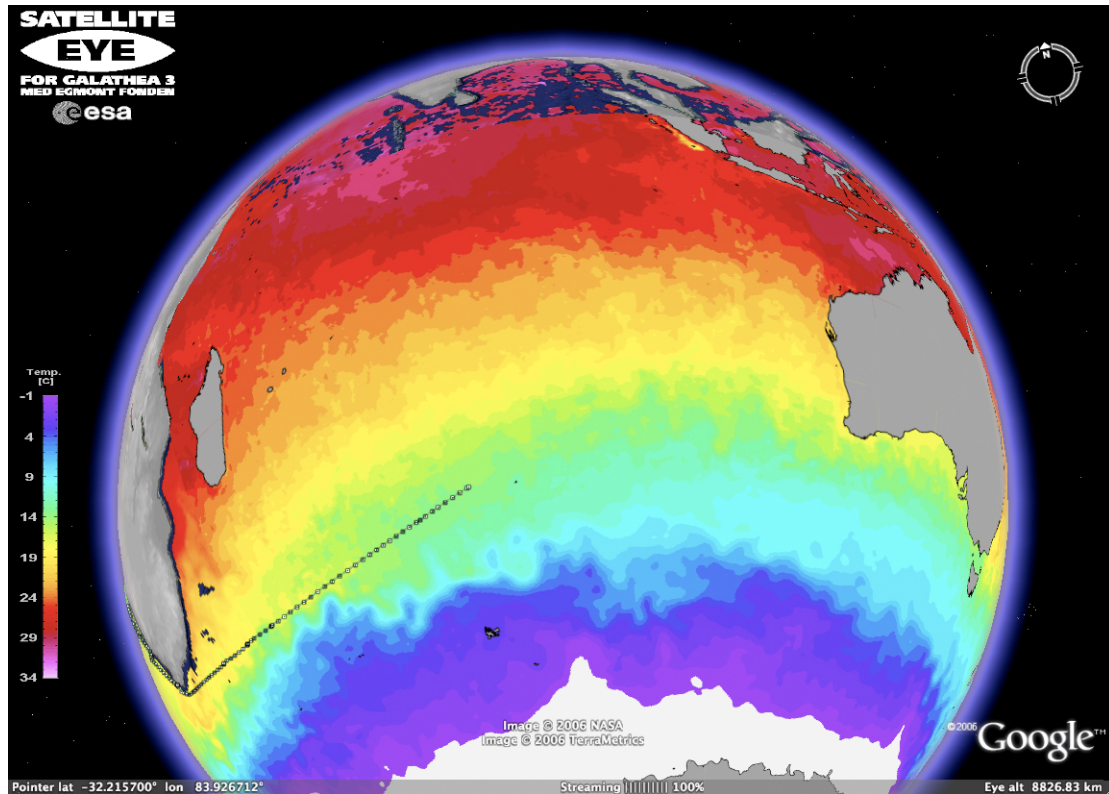


Sea surface temperature



Sea surface temperature 24th October 2006.

The image is part of the project Satellite Eye for Galathea 3 from which it is possible to access current images showing sea surface temperature in the region that the Galathea 3 expedition is visiting.

What can we see ?

The figure shows the cruise track of Vædderen and how it has sailed on the border between the cold water in the Antarctic circumpolar Current and the warmer waters in the Indian Ocean. Borders between cold and warmer waters are called fronts and it is clear from the figure that these fronts do not follow a straight line that divides the two water masses with different temperature. The strength and the structure of the fronts vary a lot from east to west because fronts associated with differences in currents tend to be unstable and meander to create eddies. The eddies play an important role in reducing the differences between the cold and warm water, similar to the atmosphere, where low pressure systems reduce the differences between warm and cold air.



Technical information:

The figure is constructed from satellite observations from several different satellites. While the infrared observations are limited by clouds, and as microwave observations have a coarse spatial resolution, it is necessary to perform an interpolation of the data before we produce a sea surface temperature field in high resolution without gaps. To achieve this, the Danish Meteorological Institute (DMI) has developed a method that combines satellite data from various satellites and at various times, and use statistics to calculate a best guess for a sea surface temperature for each 5 kilometer for the area in which Vædderen is located.

New images can be seen in Google Earth at:

<http://galathea.oersted.dtu.dk/GE.html>

The weekly image is produced by DMI that is partner in the project Satellite Eye for Galathea 3.