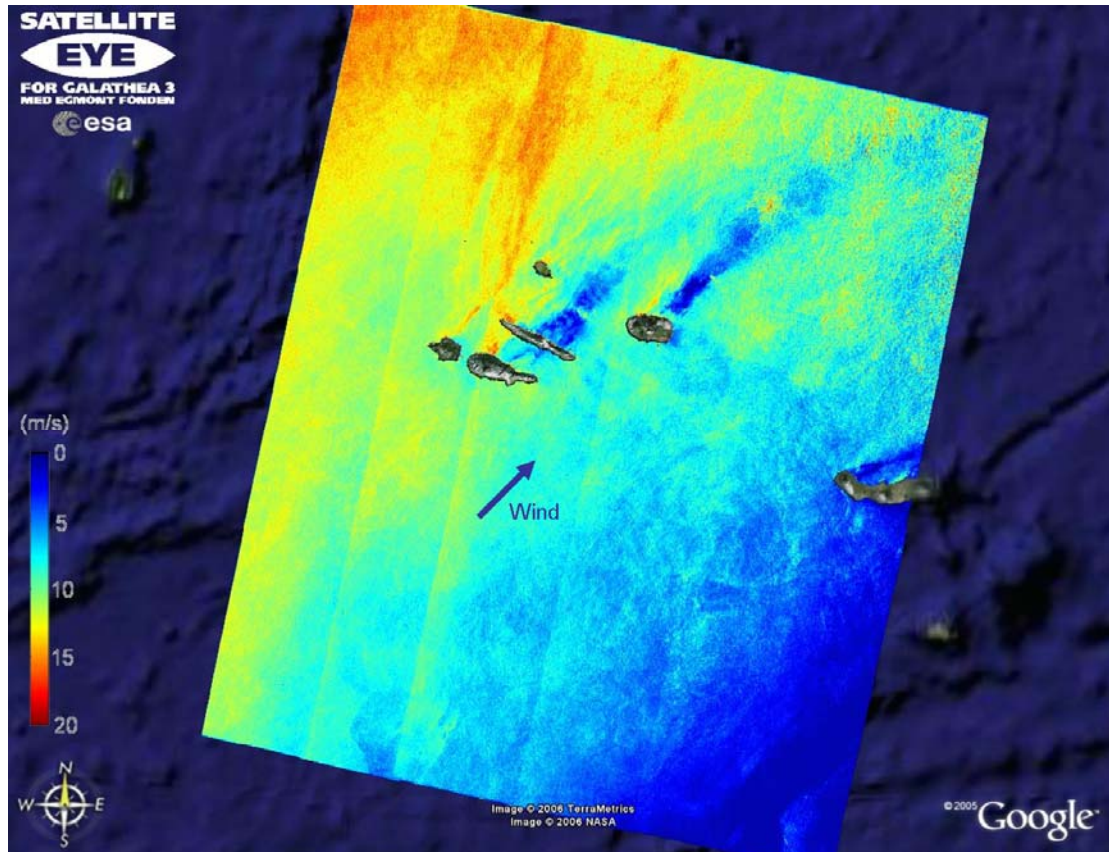


Wind at the Azores



Wind speed over the sea at the Azores 2 September 2006, 11:57 UTC. Based on radar data from Envisat.

What can we see?

The image shows the wind speed near the islands of the Azores. Red and yellow colors indicate high winds, while green and blue show areas with weaker winds. The wind is coming from the southwest as indicated with an arrow. The wind speed increases from the southeast towards the northwest in the image. The mountains and volcanoes of the Azores have a significant lee-effect. This is seen from the blue-colored areas that stretches more than 100 km behind the largest islands. Wind maps from satellite give fantastic snap-shot images of the variation of the wind. Therefore they are ideal for the description of meteorological phenomena such as the influence of terrain to the wind.



Technical information:

The wind map is based on data from the Envisat satellite that orbits Earth at around 800 km above ground. On-board Envisat is a radar sensor that emits microwave radiation and observes the amount of reflected radiation for the surface of the Earth. The backscattered radar signal from ocean surfaces is dependent upon the cm-long waves at the sea surface. The waves are generated locally by wind, thus there is a relationship between the wind speed and the backscattered radar signal.

The spatial resolution in the wind map is 600 m x 600 m. More wind maps based on satellite observations along the Galathea 3 route can be seen at:

http://www.risoe.dk/galathea/opslag/satellitbilleder_dk.htm

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

See educational material at:

<http://galathea3.emu.dk/satelliteeye/index.html>

The weekly image is produced by Risoe National Laboratory as part of the project Satellite Eye for Galathea 3.