

## The 2006 Volvo Ocean Race

The **Volvo Ocean Race**, established in 1973 as the Whitbread Round the World Race, is the most important yacht race around the world. Held every four years, participants incorporate state-of-the-art technologies and innovative boat design.

The present course covers more than **31,000 nautical miles**, starting in Vigo, Spain in November 2005 and finishing in Goteborg, Sweden in June 2006. The race is divided into 9 legs and seven inshore races, visiting 10 ports around the world: Vigo, Cape Town, Melbourne, Wellington, Rio de Janeiro, Baltimore/Annapolis, New York, Portsmouth, Rotterdam and Goteborg.



## A Partnership to Improve Ocean Observations & Products

This project is a **collaborative effort** between NOAA and the Volvo Ocean Race to exchange data and observations in order to improve products that are typically used by researchers and members of the public.

NOAA, through AOML and CoastWatch, provides all race participants with real-time data on ocean currents, surface winds, sea surface temperature and wave height obtained from satellites.

A web page developed by NOAA provides these same fields to the public so they can view the actual ocean and atmospheric conditions while following the race.

Data belong to satellites of the National Aeronautics and Space Administration (NASA), European Space Agency (ESA) and the National Oceanic and Atmospheric Administration (NOAA).



### AOML/Coastwatch Coordinators

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[www.aoml.noaa.gov/phod/vor](http://www.aoml.noaa.gov/phod/vor)

NOAA

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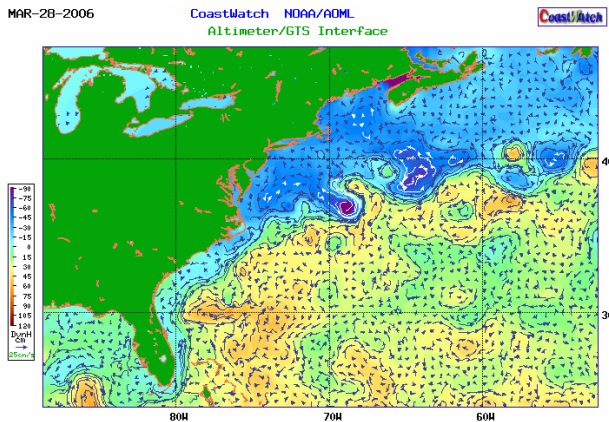
IN SUPPORT OF THE

VOLVO OCEAN RACE



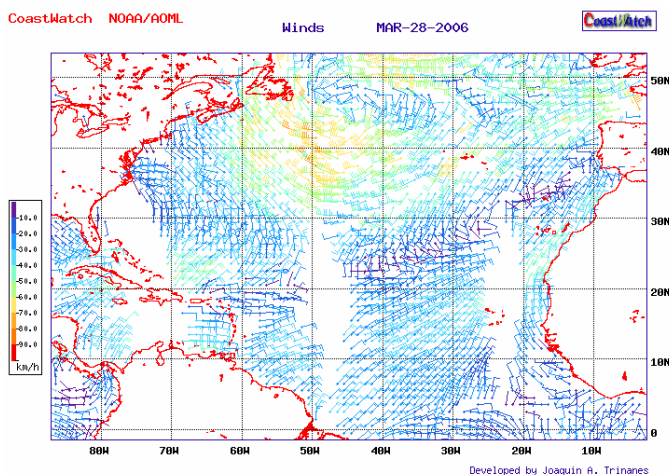
[www.aoml.noaa.gov/phod/vor](http://www.aoml.noaa.gov/phod/vor)

Before arriving on the east coast of the United States, all the sailboats have to cross the strong currents of the Gulf Stream, which have surface velocities of up to 5 knots.



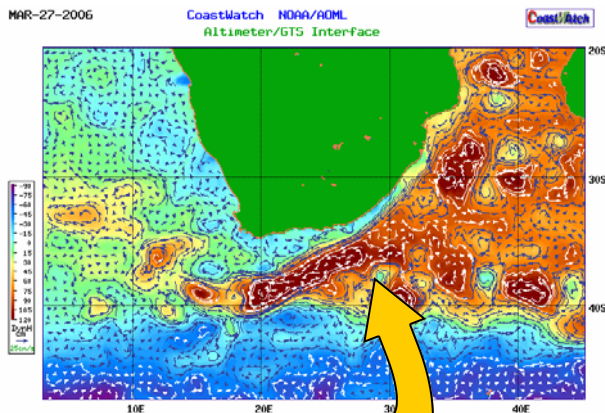
The map above shows the surface currents as observed by **satellite altimeters** in March 2006. An **altimeter** measures the sea height, which is proportional to the velocity of the surface currents.

We can observe the meandering of the **Gulf Stream**, and the warm and cold eddies associated with it. The colors indicate sea height, with the core of the Gulf Stream (reds and oranges) several feet higher than its surrounding waters.

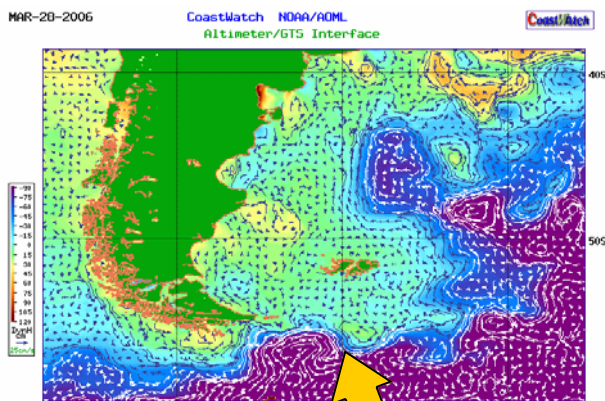


Surface wind conditions are very valuable to the participants. Below is a map the Racers received on March 28 to plan their North Atlantic sail.

Before arriving in the US, from November through March, the boats had to sail across the cold waters of the Southern Ocean and cross strong currents, such as the Agulhas Current off South Africa and Malvinas Current off Argentina.



Agulhas Current



Malvinas Current

Learn more about these real-time maps at:  
[www.aoml.noaa.gov/phod/VOR](http://www.aoml.noaa.gov/phod/VOR)

## The Atlantic Oceanographic and Meteorological Laboratory

The Atlantic Oceanographic and Meteorological Laboratory (AOML) is one of the Oceanic and Atmospheric Research Facilities of the National Oceanic and Atmospheric Administration (NOAA). AOML is a part of the US Department of Commerce (DOC) and is located in Miami, Florida. The mission of AOML is to conduct basic and applied research in oceanography, tropical meteorology, atmospheric and oceanic chemistry, and acoustics. The research seeks to understand the physical characteristics and processes of the ocean and the atmosphere, both separately and as a coupled system.

## CoastWatch

Satellites orbiting the Earth send data back to the National Oceanic and Atmospheric Administration (NOAA). This raw data is processed by NOAA/NESDIS and made available by NOAA's CoastWatch Program. Our mission is to provide and ensure timely access to near real-time satellite data to protect, restore, and manage U.S. coastal ocean resources, and understand climate variability and change to further enhance society's quality of life. Our primary users include Federal, State, and local marine scientists, coastal resource managers, and the general public. The CoastWatch Caribbean and Gulf of Mexico Node provides access to operational remote sensing data-sets, both regionally and globally.