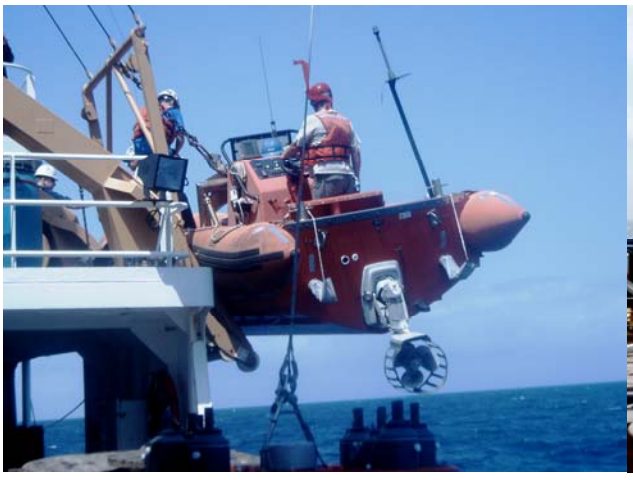
NOAA Teacher at Sea
Robert Oddo
Onboard NOAA Ship *Ronald H. Brown*
July 11 – August 10, 2009

NOAA Teacher at Sea: Robert Oddo
NOAA Ship *Ronald H. Brown*
Mission: PIRATA (Prediction and Research Moored Array in the Atlantic)
Geographic Area of Cruise: Tropical Atlantic
Date: July 23, 2009

Weather Data from the Bridge
Outside Temperature 26.77^{o}C
Relative Humidity 74.89%
Sea Temperature 27.64 ^{o}C
Barometric Pressure 1013.98 inches
Latitude 07^{o} 59.993 N
Longitude 22^{o} 59.767W

Science and Technology Log
We arrived at the first buoy two days ago and exchanged the "package" which is kind of like the brains of the buoy. Four people went out with a small boat and exchanged the package. This is not an easy task since you have to climb off the small boat onto the buoy in what can be pretty rough seas and change instruments.



Preparing to service a buoy

Recovered buoy on deck

We also deployed the "CTD" for the first time. After the deployment, we collected seawater from various depths for salinity and dissolved oxygen analysis. We also are deploying XBTs

every 10 nautical miles on a 24 hours schedule as the ship steams along its course. There are two shifts. I am on the 12 noon to 12 midnight shift. The XBT (Expendable Bathythermograph) is dropped from a ship and measures the temperature as it falls through the water. Two very small wires transmit the temperature data to the ship. When it gets to about 1500 meters, the small wire is cut and the operation is over. By plotting temperature as a function of depth, the scientists can get a picture of the temperature profile of the ocean at a particular place.

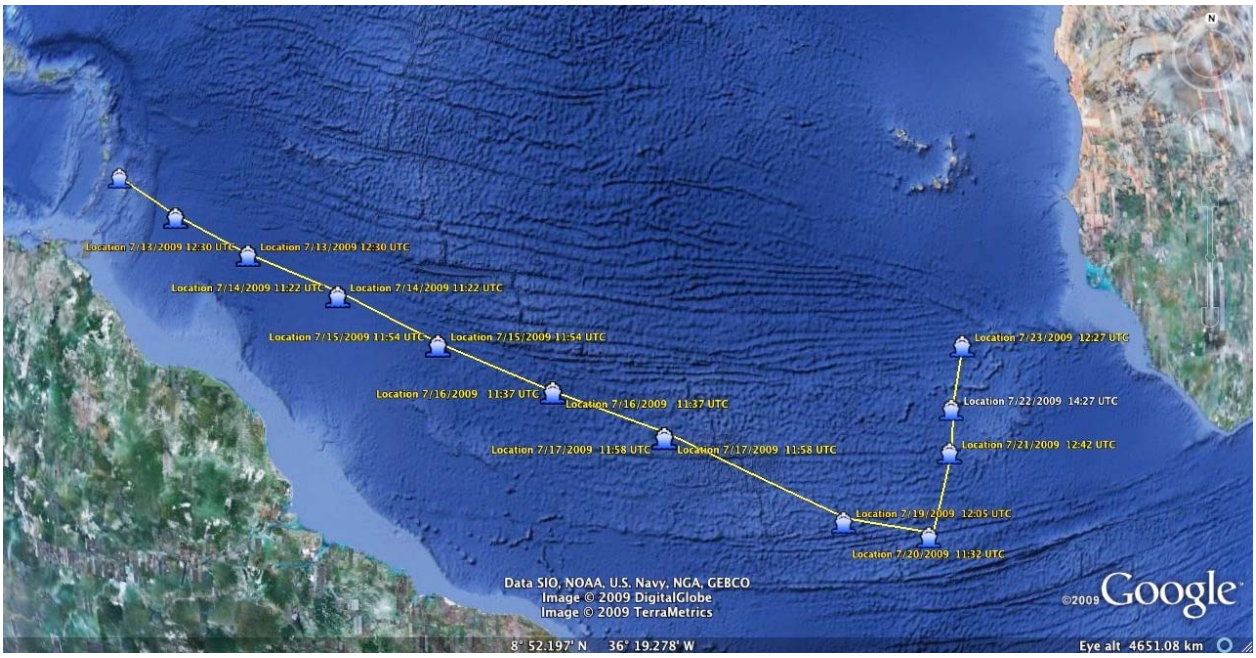
Here I am deploying an XBT.

Collecting seawater samples from the CTD

Yesterday, we got to the second buoy and had to pretty much exchange it with a new package, sensors and an anchor. This took over 8 hours to do and takes a lot of manpower. The buoy is actually pulled up on the deck as well as the instrumentation below the buoy and then new instruments, buoy and an anchor are deployed. If this is not done exactly right, everything can be destroyed.

Personal Log

Wow, there is a lot of action right now on the ship. The atmospheric scientists are releasing sondes, collecting dust and smoke samples, and measuring incoming solar radiation at different wavelengths. There are people getting instrumentation ready for the next buoys we are steaming towards. People are deploying CTDs, XBTs, and drifters. Behinds the scenes the crew lends all kinds of support, from preparing food, working the winches and cranes, navigating through the ocean and working in the engine room It is really teamwork that makes this all work and not any one person could do all of this work. There are a lot of very dedicated people onboard this ship and all their hard work make this work!!



Course we have taken since we departed from Bridgetown. More information about our current location from http://shiptracker.noaa.gov