



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 25, 2009

Weather Data from the Bridge

Outside Temperature 26.94°C

Relative Humidity 81.85%

Sea Temperature 27.84°C

Barometric Pressure 1013.74 inches

Latitude 13° 07.114N

Longitude 23° 00.000W

Science and Technology Log

I have continued to help out on the 11:30 am to 11:30 pm watch with CTDs and XBTs.

Why do so many CTDs and XBTs? The scientists on board are developing a subsurface profile of the water temperature, salinity and density. Based on these data, models can be constructed and refined that can help us better understand what is happening in the Tropical Atlantic.



Small boat going to buoy



The *Brown* seen from a small boat

The *Brown* arrived at the second buoy that needed to be serviced on July 24th. I was lucky enough to get on the small boat sent out to take some equipment off the buoy before it was pulled up on the boat. Once at the buoy, the radiometer and the anemometer were removed. An acoustic message is then sent from the *Brown* to release the anchor on the buoy. The buoy is then attached to a rope from the *Brown* and pulled up onto the fantail. All the instrumentation and sensors below the buoy are pulled up on the *Brown* and exchanged. I attached a picture of the buoy to the right so you get an idea of all

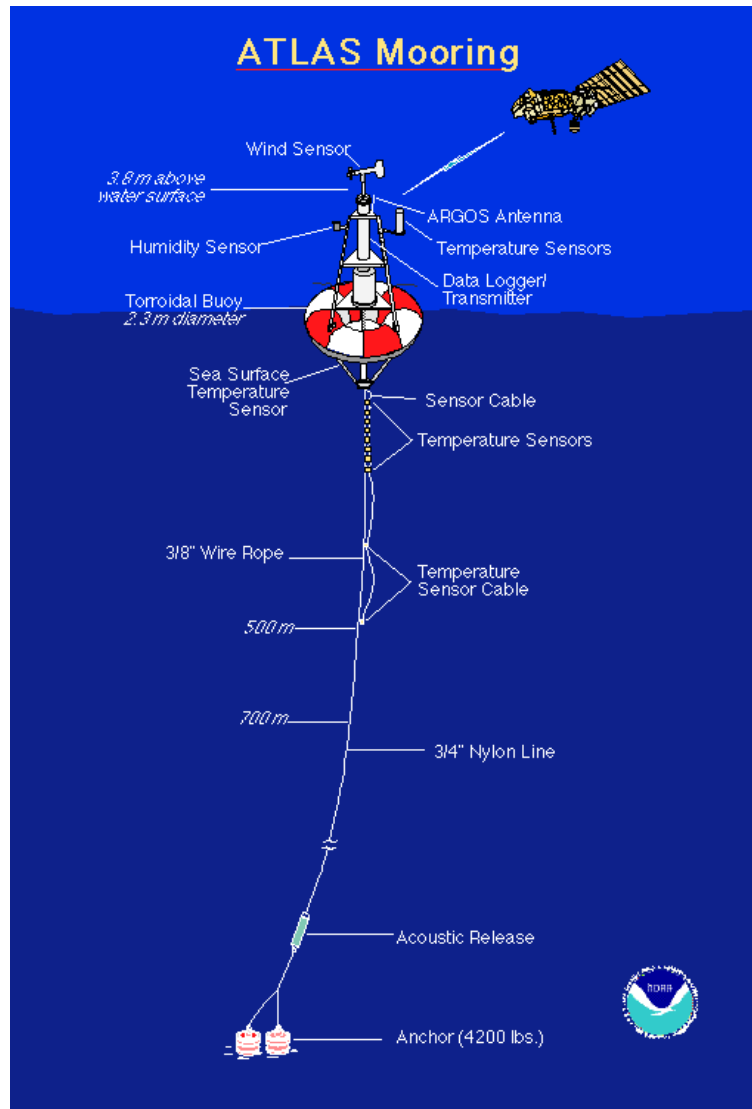
the instrumentation that is attached to these buoys.



Above: Removal of radiometer and anemometer from buoy

Right: This figure shows all the instrumentation attached to the buoy.

In the picture above the very top of the buoy is shown



I could not believe all the fish that were around the buoy. Apparently, the buoy creates a small ecosystem, where all kinds of marine organism congregate. Algae and small crustaceans attach to the buoy and some of the cables that are underneath. Small fish eat the algae and crustaceans, larger fish eat the smaller fish and before you know it you have a food web. Some of the fish are huge. Yellow fin tuna, triggerfish and mahi mahi. This actually causes a big problem. Fishermen come out to these buoys and damage the buoy instrumentation when they are fishing and we end up losing valuable data.



Got one! It's tuna for lunch!

Personal Log

Once the buoy is pulled up onto the ship, the fish that were around it looked for a place to go. Sometimes they come under the ship. We threw a few fishing lines in after the buoy was pulled up on the fantail and the tuna were biting like crazy. We caught a few that afternoon and had them for lunch the next day!!



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