



**NOAA Teacher at Sea
Eric Heltzel
Onboard NOAA Ship RONALD H. BROWN
September 26 – October 22, 2005**

Log 10

NOAA Teacher at Sea: Eric Heltzel
NOAA Ship RONALD H. BROWN
Mission: Stratus 6
Friday, October 7, 2005

Weather Data from Bridge, 07:00

Temperature: 18.6 degrees C
Sea level Atmospheric
pressure: 1014 mb
Relative Humidity: 78%
Clouds cover: 6/8,
stratocumulus, cumulus, cirrus
Visibility: 12 nm
Wind direction: 140 degrees
Wind speed: 13kts.
Wave height: 3 – 5'
Swell wave height: 6 – 8'
Seawater Temperature: 18.6
degrees C
Salinity: 35.25 parts per thousand
Ocean depth: 4476 meters



Evanston High School's Drifter Buoy,
ready for deployment!

Evanston High School, your adopted Drifter is in the water!

Lara Hutto is a Research Associate II at Wood's Hole Oceanographic Institution in Massachusetts. She and I deployed our Drifter off the port side stern of the fantail at 19:01 UTC (the time at the Prime Meridian) on October 6, 2005. Our Drifter serial number is 54410.

To: Heltzel's Oceanography/Meteorology students:

The NOAA decals you signed were placed on the dome of our drifter. All of your names and the name of Evanston High School are floating freely in the eastern Pacific off the west coast of Peru. You should be able to track it on the Drifter web page. Should anyone find it they will be able to identify who adopted Drifter 54410.

Update: the EHS drifter is streaming in data from the eastern Pacific. To check it out go to: <http://osmc.noaa.gov/adoptadrifterhtml>

I can't access this website from the ship but Kevin O'Brien of NOAA says that data is being sent by our adopted drifter. Check it out and let me know what you find.

Science and Technology Log



The sock of the drifter is unfurled

Drifters are a wonderful tool for gathering information about earth's oceans. They have a spherical top which provides flotation and contains the electronics of this device. These include a temperature probe for measuring the surface seawater temperature and a GPS tracking signal. This device is battery powered and is regularly sending out information on seawater temperature and location.

When deployed a fabric tube (sock) extends downward to a depth of between 10 and 15 meters. This is attached to the floating sphere by cable. The sock reduces the effect of winds and surface waves on the movement of the Drifters. The data is gathered via satellite and plotted. This helps us figure out movements of the ocean waters at the surface.

Compared to many of the instruments that are attached to the Stratus mooring, Drifters are the simplest. They are easily deployed because the unit activates itself once it hits the water. A magnet is attached to the dome and it holds the switch in an off position. Once the magnet is removed, the switch is activated and The Drifter is on the job. The magnet is attached with water-soluble glue so once in the water the glue dissolves, the magnet falls off, and the Drifter is activated. The sock is also rolled up and held in position with water-soluble tape. Once in the water this also dissolves and the sock extends downward. The ingenious design of Drifters makes them very easy to deploy. These are sent out with any type of ship so Drifters have been placed in many of the world's oceans. Life expectancy on a Drifter is one to two years.



An entire person can fit inside the drifter's sock!

Questions to Consider

How might the information gathered from Drifters be useful?

What are some ways that the oceans and the atmosphere affect one another?

Personal log:

My quarters are in the low part of the ship. I have no natural light to tell whether it is night or day. As I lay in my bunk I can hear the sounds of the ship pushing downward through the waves. Sometimes it sounds like gurgling water, sometimes like something solid is striking the hull, other times like the sound of rapids on a river. When I'm nearly asleep I imagine I am at home in Wyoming and the sounds I hear are of a raging blizzard outside my window. I go on deck of the RONALD H. BROWN and look at the tropical eastern Pacific waters. Toto, this definitely isn't Wyoming!