



**NOAA Teacher at Sea
Christy Garvin
Onboard NOAA Ship RAINIER
June 1 - 8, 2005**

Log 5

Day 5: Sunday, June 5, 2005
Latitude: 56 deg 59 min N
Longitude: 135 deg 17 min W
Visibility: 10 nautical miles
Wind Direction: 070 deg
Wind Speed: 8 kts
Sea Wave Height: 0-1 ft
Swell Wave Height: 0 ft (we are in a protected bay)
Sea Water Temperature: 50 deg F
Sea Level Pressure: 1012 mb

Science and Technology Log

Instead of running survey lines on a launch today, I was assigned to the plot and holograph rooms to learn what happens to the survey data when launches return to the RAINIER each evening. Depending on the weather conditions, launches return to the ship each afternoon between 1630 (4:30 p.m.) and 1730 (5:30) p.m. Once they have been raised out of the water with the gravity falls davits, the survey techs plug the launch's computer system into the main system on RAINIER. At this time, the data is pushed (or downloaded) to the ship's main network.

Two different software programs are used in the process; the launches use a program called ISIS to run the sonar, while the GPS mapping software onboard is Caris. Therefore, the data collected on the launches must be converted into a form that can be read by Caris. During the conversion process, data corrections are made based on predicted tides, the sound velocity curve created by the CTD, filtering out the outer, less reliable sonar beams, and total propagated error (a statistical compilation of error based on the specific error inherent within each system).

Once the data has been converted, the survey techs go through each line individually and clean the line by removing random sonar reflections. These reflections can be due to kelp beds, schools of fish, the boat's motor, or internal timing of the sonar. Once all of the lines on a sheet are complete, the sheet is sent to PHB (Pacific Hydro Branch) where the data is used to make nautical charts that are used by the fishing and cruise industries, as well as by any others who navigate these waters.

Personal Log

The CO of the RAINIER took me out on a skiff for a couple of hours today to see some of the bays near Sitka. We saw a harbor seal, a sea otter, and lots of bald eagles; the mountains seem to rise right out of the water, and they are absolutely breathtaking with their snow-capped tips.

Until tomorrow,

Christy