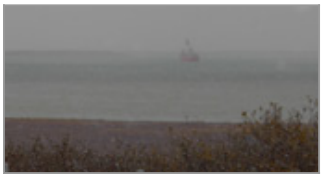
Beaufort Gyre Exploration Project
2010 Dispatches



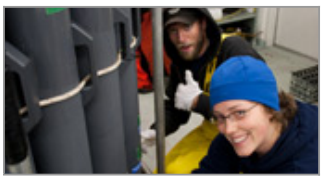
1: Summer's Over
Today begins the 2010 Joint Ocean Ice Study (JOIS) cruise (including our BGOS program) on the Canadian Coast Guard icebreaker Louis S. St. Laurent.

2: Getting Started
After breakfast, all scientists and new crew members gathered in the forward lounge for a briefing by Captain Marc Rothwell followed by survival suit training and an instructional tour of the ship by 1st Officer Catherine Lacombe.

3: On Our Way to Tuk
Before heading into the icepack, the Louis needs more fuel to ensure that we will not run out during the expedition and to add weight to the already massive ship to facilitate the ice breaking capability.

4: Water Sampling
nother CTD/Rosette cast was conducted today at a location of scientific interest close enough that we could be back at the refueling site tomorrow morning.

5: Sunday Supper
There are 3 messes to eat in on the Louis: the crew's mess, the officer's mess, and the Captain's wardroom. For the most part, the same excellent cuisine is served in all places.

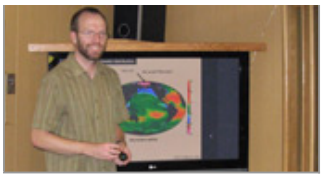


6: A Day in the Life - or - Twenty-Four
Jeffrey Charters describes a typical day on the Louis for the hydrography team.

7: First Day of Autumn
The work has been fast and furious for the hydrographers and chemists as the station sampling has been close while we transect the continental slope in order to resolve the different waters between the shelf and basin.

8: Heading East
Having completed stations along the 140° W meridian up to 73° N latitude, we now turn eastward to obtain as much of the section as we can along 73.5° N approaching Banks Island.

9: Back to Tuk



We have started steaming south out of the ice pack and towards Tuktoyaktuk for our appointment to refuel.

10: Refueling (Hooray!)
The barge is at the meeting location when we arrive, and fueling begins on this day. The 2000 cubic liters (or 528,000 US gallons) of fuel that we are receiving will take approximately 24 hours to pump from the barge.

11: Saturday Night Lights
Last night somewhere around 2am I awoke to see a head silhouetted in my doorway, with Kelly telling me that there's northern lights, and "they're really good this time".

12: On Our Way to Station A
Full of fuel, we are now heading northwest toward the first of our mooring recoveries, but on the way will take a few more CTD/Rosette stations and drop a few Expendable CTDs (or XCTDs).

13: Below Decks
The engineering department keeps this ship operational 24 hours a day, 7 days a week. When on deck, working or asleep at night, often times these simplest things are simply forgotten, but it's the hard work and dedication of the engineers and oilers which keep us going.

14: Mooring Recovery
Light snow covers the foredeck of the ship this morning as we arrive at the location of Mooring A (nominally 75° N, 150° W). Although there is some thin pancake ice that has just begin to form during freeze up, the ice conditions are favorable for our recovery, as there is very little thick (multiyear) sea ice in the vicinity.

15: "A" Redeployed
After a quick overnight turnaround (to make up for some of the time lost to fueling) of the instruments and mooring hardware, the mooring team and deck crew are back on deck before sunrise preparing to redeploy Mooring A.

16: Being a nurse on the Arctic Ocean
Gabrielle Fortin-Bouchard shares her perspective as the shipboard nurse.

17: Another fine day
Recovery of Mooring B at 78° N, 150° W commenced early on another cold day with scattered snow showers.

18: Sunrise/Sunset ITPs
Besides the subsurface moorings, the BGOS portion of the JOIS program includes deployments of Ice-Tethered Profilers, which are drifting buoys with profilers that acquire and transmit to our laboratory in Woods Hole in near-real time.

19: Back to "B"
Despite subfreezing temperatures and snow and ice on deck, the deck crew and WHOI group redeploy mooring B without incident.

20: IBO Monday
An Ice-Based Observatory (or IBO) is a cluster of buoys deployed on the drifting sea ice that combined measure a variety of properties throughout the surface atmosphere, ice, and ocean.

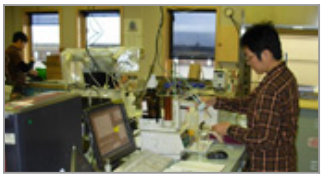
21: Polar sunset and new ice
Day length is shortening rapidly as winter approaches in the far north. We had 12 hours of daylight at the equinox on September 21st and now there is much less.

22: Twenty-Four II - Another Day in Paradise
Jeffrey Charters decribes another day in a scientist's life on the Louis.

23: The O-buoy
One of the components of an Ice-Based Observatory, the O-buoy measures the chemistry taking place in the Arctic atmosphere.

24: Last Ice Ops
Today is our last opportunity to deploy our last ITP.

25: A Mooring View from Above
After several previous dispatches on mooring deployments and recoveries from the viewpoint of those on deck, this dispatch gives a view of mooring deck operations from above.



26: In the lab

27: Last Mooring
At Mooring site D early in the morning, preparations begin to deploy the last of the BGOS moorings and finish this portion of the cruise.

28: Photos by Sarah
As we head east, finishing up the last section of CTDs leading up to Banks Island, there is a cheerful spirit amongst the scientists onboard knowing that we will soon be going home.

29: Wrap Up
Friday, we awakened anchored offshore of Kugluktuk which is overcast and covered by light snow. Goodbyes all around, and we are flown ashore on the helicopter to the airport. First stop Yellowknife, then Edmonton, and from there the scientists will split off in many different directions for home. See you next year

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