

## Irminger Sea: Oct 28

### A Drag by Dallas Murphy

Dr. Bob's last mooring was not responding to its acoustic wake-up call. Jim, mooring operations leader, had hung the transducer, the device that sends signals to release, over the side. Dr. Bob and several others of us stood around waiting while Jim watched the "deck unit," where the return signal from the transducer would register. Jim shook his head. Maybe the air temperature was too cold; icicles hung from the side rails of the ship. Maybe the deck unit didn't like it up here above the Arctic Circle. Jim unplugged and carried the unit inside, reran the cable, and tried again. Nope. No response.

There were two possibilities. Either the entire mooring, along with the Moored Profiler, worth about \$100,000, was gone, swept away by a fishing-boat's trawl net or an ice berg or blown away in a storm. However, the other seven moorings set in much stronger current and in the direct path of bergs riding down on the East Greenland Current were all recovered successfully. Maybe the mooring was down there, but the acoustic mechanism in the mooring's release had failed due to flooding or something. If that was the case, how do you get it up? The anchor at the bottom was lying 1,000 meters deep, and the flotation ball was set 100 below the surface. Dr. Bob knew exactly where he'd left it, and now the question was, would the ocean give it back.

"I guess we're going fishing," someone said.

After lunch, Kyle, Dan, Jim, and Kjetil suited up to "drag" for it. Remember in an earlier dispatch we said that oceanography was a combination of seamanship, science, and heavy industry? Well, we were about to see the heavy-industry part. The seamanship would come later in the day; meanwhile science had to wait, watch, and hope.

In frigid cold, a short-period swell running, the mooring team began assembling the drag line. First, they laid out a length of cable from the stern winch and ran it through a block (a pulley) up on the big "A-frame" mounted over the transom. The A-frame is shaped more like a very thick goal post with two legs and a similarly stout crossbar. Hydraulically controlled, the A-frame can be made to move fore and aft, up and down, and another huge device fixed to the crossbar, referred to as the "arm," telescopes up and down. *Knorr's* A-frame, immensely powerful and equally versatile, is, according to Bosun Kyle, the best of its kind on any ship in the world.

The mooring team bolted a 300-pound chunk of iron to the cable and lowered it into the water. Kyle signaled Kjetil, manning the winch, to lower away about 50 meters, then to stop. With the cable hanging straight up and down, the guys bolted on two big grappling hooks about 20 meters apart. These, we hoped, would snag the silent mooring. There was one more piece to go, a 1,300 pound weight, and when that was done, the business end of the fishing line, altogether about 100 meters long, was complete. But the job was not. The next step would be tricky enough if performed on dry land on a summer day, but they were doing it in freezing weather on a wet, pitching deck.

Now they had to transfer the load from the deck winch to a far more powerful one called the trawl winch. The winch drum containing 10,000 meters of thick cable was mounted low in the stern—you can see the drum in the gym—and operated from a little house on the second deck. This was inherently dangerous work, given the loads and the conditions, but these pros made it look easy. They took up the tension on the A-frame winch, eased away on the stern winch, then shackled the fishing rig to the bitter end of the trawl-winch cable. That deftly done, the action shifted to the bridge, and I made my way up to spectate.

I wasn't alone in that. Dr. Bob, outwardly calm, had been up there waiting and watching. Chief Mate Dee was on duty, and the Captain was on the bridge. And so were the watchers. We spoke in whispers so as not to disturb the brain trust, and we tried, with some success, to stay out of the way.

Captain Kent pressed his radio mic. and said to the man in the winch house, "Bill, down at 30 meters a minute, please."

"Thirty meters, roger that."

We waited watching the video shot of the big winch drum turning.

"What's the bottom like here?" the Captain wanted to know.

"Probably rock," Dr. Bob replied.

The computer screen on the Dynamic Positioning System showed the precise position of Dr. Bob's mooring as well as a "picture" of the ship with the drag line running down an astern. We were close.

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Dragging operation photos by Dallas Murphy

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"Dee," said the Captain, "take her fifty meters due west."

His plan was to walk *Knorr* sideways, keeping the mooring position between the stern and the drag line. Second Mate Dee repeated the order according to custom to assure it was understood. We gathered around to watch the screen. The ship's progress showed up as a shadow beside the ship icon.

Meanwhile, Bosun Kyle stood by on the stern to watch the wire angle. If it changed sharply that might indicate, like a bending fishing rod, that we had something.

"Bill, stop at one-zero-zero-five," said the Captain.

"Roger that."

We watched and waited. Nothing.

"Dee, take her due north 100 meters."

"One hundred meters north."

"How's the wire angle, Kyle?"

"Slight aft angle."

Nothing.

Jim came up on the bridge and discussed with the Captain the length and configuration of his trawl. Captain Kent went to plan B. We'd circle the mooring position, lasso the thing. He picked up an l-pod with its wire attached to demonstrate his intentions. "This is the ship, and this is the weight..."

We watched the screen. It was getting dark, snow turning to rain. This would be the last chance, since we were due to leave for port tomorrow. *Knorr*'s shadow ringed the mooring position. We waited.... It had been seven hours since Jim first tried to wake up the mooring. Nothing.

"Call it a day?" asked the Captain.

Bob nodded. He and his colleagues had just lost a year's worth of precious data and a very expensive device, not to mention a day spent fishing but not catching. He took it like a pro.

This, too, is oceanography.

## Angalanerup aqutigisinnaasai by Nick M?ller

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Mail: Woods Hole Oceanographic Institution, 266 Woods Hole Road, Woods Hole, MA 02543, USA.

E-Contact: [info@whoi.edu](mailto:info@whoi.edu); press relations: [media@whoi.edu](mailto:media@whoi.edu), tel. (508) 457-2000

Problems or questions about the site, please contact [webdev@whoi.edu](mailto:webdev@whoi.edu)