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# Beaufort Gyre Exploration Project: Dispatch 17: Fogbows and Floats

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Late last night, the sun played hide-and-seek behind a low fog bank. A strong cold wind blew ragged patches of chilly mist across the decks. When the fog enshrouded the ship a bright white colorless arc appeared opposite the sun. Like a rainbow but pure white in color, fogbows form by light refracting through the tiny droplets of water in the fog. The water droplets are so small, though, that they can't form the spectrum of colors we see in a rainbow. The ghostly arc faded and intensified roughly every ten minutes as the fog swept by. I wasn't the only one to notice the curious atmospheric phenomenon--Ryan North and Jeffrey Carpenter joined me for some midnight photography on a broad deck on top of the bridge, high above the icescape. The nearly 360 degree view allowed us to watch the sinking sun, the field of ice, and the ephemeral fogbow. Eventually thick clouds swallowed the sun, but at this latitude we have yet to experience darkness. Only by the cycle of meals on the *Louis* do the concepts of "morning" and "evening" really apply up here.

The light streaming through my porthole was dull and flat when I woke up this morning, but the fog had lifted. Leaden clouds covered the sky, but the air was dry and warm. Immediately after breakfast the mooring group began deployment of Mooring B, the second deep subsurface mooring of the Beaufort Gyre Observing System. Watching the crew in action, it was apparent that this was becoming routine. Everyone anticipated the action; I don't think I heard John's whistle for attention even once today. Just after lunchtime the mooring was in position and the top sphere was gingerly lowered to the dark water below. Once John confirmed that we were in position, he pulled the quick release and the mooring shot downwards. Unlike the Camp Smiley moorings, it will be year before we will see any plots of this data.

Our bow is now pointed eastwards. On our way to the next CTD station we passed through patches of fresh rubbery "grease ice." The sound of the hull crushing the thin ice is like the tinkling of broken glass. Then, boom boooom booooom takes over--it's back into the multi-year floes. Tomorrow we will be searching for another solid multi-year floe for the second ice camp. Let's hope the fogbows are left behind, because good visibility is critical when scouting for floes in the helicopter.

*Last updated: September 6, 2013*

A strong fogbow.

Break in the action. John Kemp (left) waits to attach glass floats to the mooring line while Bos'n Bob Taylor looks on.

When the spools of line need to be changed out, Kris (left) and John (right) use a Yale grip to hold the line.

Kris Newhall drives the Lebus winch, which slowly lowers the mooring during the deployment.

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