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Beaufort Gyre Exploration Project: Distpatch 2: All in a Day's Work

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There’s nothing like mounting a delicate sensor ten feet out past the front edge of a Canadian ice breaker while steaming through Arctic waters to get an adrenaline rush. Today I worked with Yasuhiro Tanaka, a student from Kitami Institute of Technology and several of the ship’s crew to install this sensor that measures downwelling radiation from the sun and upwelling radiation from the sea surface to learn more about the reflectivity of sea ice.

The technical term for the earth’s surface reflectivity is albedo, and we know that it helps regulate our global climate. The bright white surface of sea ice is highly reflective, and has a cooling effect on the earth. When sea ice recedes the dark blue open ocean absorbs more sunlight, trapping more heat close to earth.

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The installation of this radiation sensor involved welding a steel base to the front rail of the ship, mounting a boom with the sensor attached out in front of the boat, and connecting cables from the outer end of the boom up to the mast. I was grateful to have support from the ships engineers, officers, seamen, and mechanics.

That was today’s work – in addition to getting familiar with the boat, locating equipment (not easy for a newcomer!), mounting weatherized cameras on the top deck, performing safety drills, and meeting with all the scientists to learn more about each other’s research. I look forward to completing the set up and falling into a rhythm, but there’s much more to do before we find our groove.

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