

Beaufort Gyre Exploration Project: Dispatch 18: Deploying an ITP!

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Rick and Will have found a suitable floe and we are going out to deploy an ITP. I am going out on the ice! We helicopter out to the site and work begins right away. First Will and Jim drill the hole using a 10' auger bit. They drill 3.2 meters down, into the water below.

Will Ostrom (left), Jim Dunn and I start the ITP hole. Photo by Rick Krishfield.

Jim guides the anchor into the hole while Will controls the fall with the brake on the Arctic Winch.

First to go in is the anchor, weighing 250 pounds. Note that it is designed to fit into the 10" hole. The anchor is lowered into the hole with a most interesting device. The Arctic Winch was designed by Don Peters at WHOI specifically for ITP deployment. It is lightweight, made of aluminum, so it can be carried onto the ice. It comes apart for easy shipping and moving. Its design exploits the weight of the anchor so that the weight of the anchor pulls the line down into the water beneath the ice. Next the profiler goes in, another innovative WHOI design.

Rick prepares to attach the profiler to the line. Jim (kneeling) is cleaning out the hole with the *chipper dipper* to remove any slush.

The weight of the anchor and the profiler pull the line into the water below the ice.

The profiler functions much like the MMP on moorings-- it travels up and down the wire measuring the temperature and salinity of the ocean water it travels through. (Remember, the ITP is on ice -- which moves around the Arctic.) After the profiler goes in, we have time to appreciate our surroundings while the weight of the anchor pulls the line down 760 meters. Our ice camp is named Ice Camp Louis.

In the top of the buoy sits the GPS and the Iridium phone that calls Rick's lab at WHOI with its data, allowing him to go home and not have to stay in the Arctic 24/7/365 to gather the data.



The ITP Guys: Rick, Will and Jim adrift at Ice Camp Louis in front of the ITP buoy.

One in, 4 to go.

All photos by PolarTREC teacher Gerty Ward unless indicated.

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The ITP is fully deployed. The profiler will travel down and up the line, collecting CTD data as it goes. The first data transmission will be tonight at midnight GMT, while we are finishing supper. Note ship in background.