

Subproject: Ocean-Sea Ice-Atmosphere Interactions

Actual field dates: August 20-October 1, 2015

Field site: Beaufort Sea, Canada Basin, Amundsen Gulf and Penny Strait

Number of man-days in the field: 84

Summary:

During this cruise our goal was to deploy 4 on ice towers. Due to time constraints, ice conditions and being unable to fly the helicopter during the first half of the leg we were able to deploy only 3 of these towers. The deployment of each tower required finding the correct type of ice. Typically the ice floes in the area were rotting or heavily degraded multi-year ice, making finding a suitably thick piece of ice difficult. This type of ice was not a suitable work environment due to safety considerations. The goal was to find a piece of ice that would survive through the melt and into the fall freeze up, and possibly through to the next summer.

On September 9 2015 two on ice towers were deployed using the CCGS Amundsen ice cage. The deployment protocols were followed and the system was tested with receiving confirmation that the units were running and functioning properly. On the morning of September 10th both systems were having problems. In order to check the systems and the ice beacons the helicopter was deployed to find the stations and test the systems. The on ice tower that was not transmitting data was reprogrammed and tested as well as the ice beacon replaced. The second tower when found only needed to have the ice beacon replaced. After returning to the ship with the helicopter the third OIT was deployed via the ice cage in the afternoon of September 10th. After checking the data again for the malfunctioning tower, the system was still only transmitting partial data and at irregular intervals. Due to this on the evening of September 10th the CCGS Amundsen was brought back to the location of the initial deployment and the whole system was replaced. During the replacement of the system physical ice sampling was done to characterize the ice.

Photos:

Fig.1: The cruise path of the CCGS Amundsen during Leg 3B (September 2015) when the three on ice towers were deployed.

Credit: Lauren Candlish

Fig.2: The deployment of an On Ice Tower using the ship's ice cage. Credit: :

Lauren Candlish

Fig.3: An On Ice Tower deployed in ice thicker than 6 meters.

Credit: Lauren Candlish

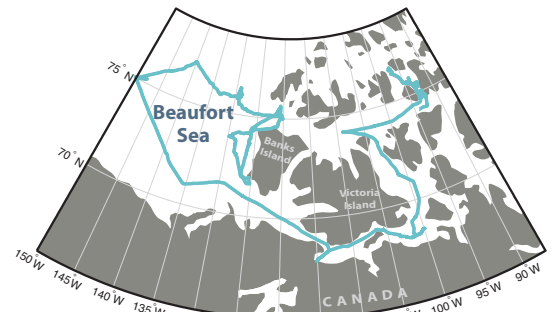


Figure 1



Figure 2

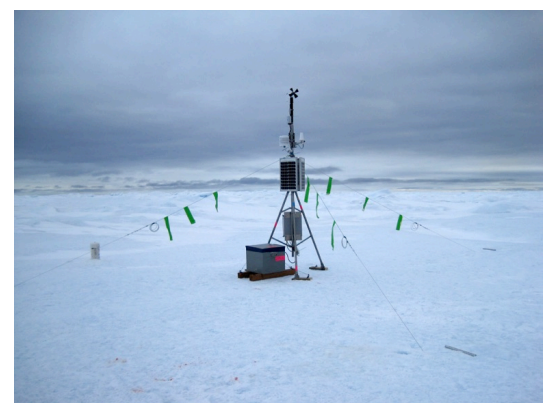


Figure 3

Participants:

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Acknowledgements:

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