

US Navy leads international effort to deploy buoys into the Arctic Ocean

On 12 September the Office of the Oceanographer of the Navy and Office of Naval Research and US National Ice Center (USNIC) Public Affairs reported that with the Danish Joint Arctic Command, Environmental and Climate Change Canada and University of Washington deployed buoys into the Arctic Ocean during a joint mission.

This joint mission was conducted to collect weather and oceanographic data to enhance forecasting and environmental models thereby reducing operational risk for assets in the Arctic.

In the words of Commander Ruth Lane, CO of the U.S. National Ice Center: *‘Polar lows are like hurricanes of the north and the data collected from these buoys will help us with numerical weather prediction, which will help to keep our and our partner forces safe.*

‘For example, when Hurricane Irma was approaching the Caribbean Islands. Once the hurricane was within the range of NOAA’s Hurricane Hunter aircraft they flew out and dropped buoys through the hurricane. The surge of observations returned improved the track and intensity models. Forecast accuracy improves tremendously from the surge of local observations. Our goal with these Arctic buoys is a similar return on investment.’

Ice-hardened buoys, known as Air Expendable Ice Beacons (AXIB), were deployed from a Royal Danish Airforce C-130 aircraft deploying out of Thule Air Base in Greenland.

Lieutenant Emily Motz, US National Ice Center, coordinator for the Arctic Buoy Program said: *‘Pilots supporting the Danish Joint Arctic Command were conducting training flights in the high Arctic, so we were able to leverage these flights to deploy the buoys for the first time out of a Danish aircraft and only the second time over the North Pole. The buoys will provide data for 3-5 years providing operational and scientific community’s access to the in-situ observations available to all forecasters and researchers through the International Arctic Buoy Program (IABP).’*

USNIC, in partnership with University of Washington, is responsible for management and coordination of the US Interagency Arctic Buoy Program (USIABP) and represents other US agencies including International Arctic Research Center, NASA, the National Science Foundation, Naval Oceanographic Office and Office of Naval Research.

The IABP is a conglomeration of global participants that maintain a network of drifting buoys in the Arctic Ocean. The buoy effort also provides important data to the Office of Naval Research Seasonal Ice Zone Reconnaissance Surveys (SIZRS) program, which is the core of their Arctic and Global Prediction Program.

To conclude Ninette Sadusky, senior science policy advisor, Office of the Oceanographer of the Navy reflected: *‘Unique opportunities like this are a result of relationships built under the International Cooperative Engagement Program for Polar Research. ICE-PPR is a multi-national effort led by the Office of the Senior National Representative within the Office of the Chief of Naval Operations (OPNAV N94). It is important that we continue to foster partnerships and ongoing missions like the buoy program continue to thrive.’*

Picture captions

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An Air-Deployable Expendable Ice Buoy is deployed on 7 September in the high Arctic near the North Pole from a Royal Danish Air Force C-130 aircraft operating out of Thule Air Force Base in Greenland, as part of the International Arctic Buoy Program (IABP).

The deployment team, led by the Office of Naval Research, included personnel from the National Ice Center, Office of the Oceanographer of the Navy, Environment and Climate Change Canada and the University of Washington.

IABP is a conglomeration of global participants that maintain a network of drifting buoys in the Arctic Ocean that provide meteorological and oceanographic data for real-time operational requirements and research purposes.

US Navy photo by John F Williams/Released. ©USN.

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Lieutenant-Commander John Woods, from the Office of Naval Research (ONR), reserve component, and Ignatius Rigor, from the University of Washington, prepare an Air-Deployable Expendable Ice Buoy for deployment in the high Arctic near the North Pole from a Royal Danish Air Force C-130 aircraft as part of the International Arctic Buoy Program (IABP).

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