August 18, 2009

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Deployment of Research Buoys in the Arctic by Around the Americas Project Aids Collection of Data on Changing Oceans and Consequences of Global Warming

SEATTLE—Now traversing the Northwest Passage, the *Ocean Watch* crew – four professional sailors, a scientist and an educator – recently completed the deployment of three NOAA Global Drifter Program buoys. Dr. Ignatius Rigor, research scientist at the University of Washington Applied Physics Laboratory (UW-APL) Polar Science Center and Coordinator of the International Arctic Buoy Program (IABP) is directing these activities. This project, one of eight scientific projects planned throughout the 13-month *Around the Americas* expedition, focuses specifically on the polar regions of the 25,000-mile circumnavigation of North and South America and will further support the expedition's mission of highlighting the changing conditions of our oceans.

With major funding from The Tiffany & Co. Foundation, the *Around the Americas* expedition is the first of its kind, taking an intimate, often scientifically focused look at the health of the world's oceans and the impact of global climate change on local environments and ecosystems. The converted 64' sailboat named *Ocean Watch* serves as a research platform to collect data and test new field methods on its unusual and sometimes remote expedition. Ten scientists from seven institutions (UW-APL, the Joint Institute for the Study of the Atmosphere and Ocean (JISAO), RMR Co., MIT Sea Grant, NASA, Western Washington University, and Yale University) have placed a diverse suite of instruments on board *Ocean Watch* to collect "datasets of opportunity" throughout the expedition. Their research spans topics ranging from sea ice and weather to jellyfish populations and underwater sound: all projects contribute to the understanding of changing conditions in the atmosphere and ocean.

Rigor notes that "observations from ships provide a wealth of information that helps us understand our oceans and climate, especially in the data sparse Arctic" and says "Ocean Watch has been providing data that enhances the weather and sea ice forecasts."

International Arctic Buoy Program Details and Achievements

Tracked by satellite and weighing approximately 45 pounds, each buoy is equipped with sensors to measure air pressure and surface temperature – data widely used by both weather and ice forecasters. Since 1979, the IABP has deployed nearly 1000 buoys. In 2008, data from the buoys played an instrumental role in having the polar bear listed on the threatened species list.

After approximately two years, the IABP buoys stop transmitting their location and are typically lost. However, the crew of *Ocean Watch* recently retrieved one of the IABP buoys deployed in 2006 from an island in the Chukchi Sea, where it was beached near Barrow, Alaska. The tracking device on the buoy was still working and Rigor noted the instrument's exact coordinates. Ice and

satellite data provided by the UW-APL, the National Ice Center, and the Canadian Ice Service, which form the North American Ice Service (NAIS), were critical in helping with this recovery. The buoy will be sent to Christian Michelsen Research in Norway for refurbishing and redeployment.

After a brief stay in Cambridge Bay, *Ocean Watch* will continue to traverse the Northwest Passage, en route to the next scheduled stop in Resolute, Nunavut. Daily reports of their progress are filed from the boat along with photos and video at www.aroundtheamericas.org. The non-profit program is co-produced by Sailors for the Sea in Boston and Pacific Science Center in Seattle.

About Around the Americas

Around the Americas is an historic 25,000-mile clockwise-circumnavigation of the North and South American continents, never before undertaken in continuous fashion. The sailboat, equipped with some of the latest technology, along with scientists and educators who join during various legs of the voyage, is making 31 stopovers in 13 months to draw attention to the changing condition of the oceans. With major funding support from The Tiffany & Co. Foundation, a non-profit consortium has been formed to make the public more aware of the plight of our oceans. Developed by Sailors for the Sea, a non-profit organization that educates and empowers the boating community to protect and restore our oceans and coastal waters, in partnership with Pacific Science Center, a nationally recognized leader in informal science and environmental education. The crew includes Captain Mark Schrader, a world-record-holding, solo circumnavigator and ocean race director, and three talented, experienced, professional sailors, who all care about ocean conservation. Daily updates of the voyage are being posted from the boat at www.aroundtheamericas.org.

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