‘Arctic Ice: A Visual Archive’ to Open at NAS


With support from the International Arctic Buoy Programme (IABP) and funded by the National Science Foundation and the Office of Naval Research, Keener and Holzman, in collaboration with Rigor and Woods, designed custom instruments, deployed them in the Arctic between 2019 and 2022, and collected the data represented in this exhibition. It presents two new bodies of work created this year — Iceberg Portraiture and Sea Ice Daily Drawings — integrating field data, remote satellite imagery, scientific analysis, and multimedia visual representation to document Arctic ice that is disappearing due to climate change. The Iceberg Portraiture series shows how icebergs undergo constant changes as they journey from glacier to fjord to coastal islands to the sea and ocean beyond. The Sea Ice Daily Drawings show subtle temperature and color variation throughout a vertical profile of air, sea ice, and ocean in the Arctic.

With this work, Keener and Holzman’s goal is to make scientific data tangible, visceral, and experiential. They ask how artistic and creative practices can contribute to scientific endeavors while expanding the visual possibilities of science communication. What emerges are alternate perspectives into the collection and representation of environmental data.

Much of what researchers know about the oceans and sea ice has been gained through environmental modeling devices, deployed at different times in different locations. When combined, this data becomes the substance of complex and ever-evolving scientific research. “Arctic Ice: A Visual Archive” provides a small window into the datasets that compose climate science.

Cy Keener is an interdisciplinary artist focused on recording and representing the natural world. He is an assistant professor of sculpture and emerging technology at the University of Maryland, College Park. Since 2018 he has collaborated with scientists to document sea ice, icebergs, and glaciers in the Arctic. Justine Holzman is a landscape researcher, designer, and educator with a background in landscape architecture. Holzman is currently training as an historian of science at Princeton University, New Jersey, where her doctoral work focuses on how knowledge is produced about environments and how landscapes are designed and transformed for scientific research. Ignatius Rigor is a climatologist at the Polar Science Center, Applied Physics Laboratory, and an affiliate assistant professor in the School of Oceanography at the University of Washington in Seattle. Rigor studies Arctic and Antarctic sea ice, which is one of the primary indicators of global climate change. John Woods is the Deputy Director for the U.S. Navy’s International Engagement Office, responsible for bilateral and multilateral cooperation with Allies and Partners. John served for over 12 years on active duty first as a Surface Warfare Officer aboard USS Cleveland and then as a Meteorology and Oceanography Officer. Together, Rigor and Woods manage the IABP, an organization responsible for coordinating the deployment of weather and climate instruments on the Arctic Ocean and maintaining a 30-year-record of Arctic climate data.

“Arctic Ice: A Visual Archive” is on exhibit at the National Academy of Sciences, 2101 Constitution Ave., N.W., Washington, D.C. The building is open from 9 a.m. to 5 p.m. on weekdays, and closed weekends and holidays. A photo ID and proof of up-to-date vaccination against COVID-19 are required. (continues on page 2)
Cultural Programs of the NAS sponsors exhibitions, salons, theatrical readings, and other events that explore relationships among the arts and sciences. The NAS is a private, nonprofit institution that recognizes achievement in science by election to membership, and — with the National Academy of Engineering and the National Academy of Medicine — provides science, technology, and health policy advice to the federal government and other organizations.

Press Images

Clockwise from top left: A tripod supports light and temperature sensors that extend from the air above the ice down through the ice and into the ocean. The watertight enclosure to the left houses custom electronics, a battery, and a satellite modem to transmit data off the ice. This sensor is typical of the custom instruments designed by Cy Keener and Justine Holzman to collect data and to inform their artwork; 13 DSE S 2.24 (5063990), 2022, aluminum, ink, and wax pastel, 84 x 42 inches; Installation photo of Sea Ice Daily Drawings, 2019-2022.

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