



Los Alamos team sets sail for Arctic on year-long research expedition

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LOS ALAMOS, N.M., Sept. 23, 2019—Heading off to spend months on a ship trapped in the Arctic ice, a team from Los Alamos National Laboratory got underway last week aboard the *R/V Polarstern* from Tromso, Norway. They are supporting MOSAiC, the Multidisciplinary Drifting Observatory for the Study of Arctic Climate field campaign, a multinational effort of more than 600 scientists, technicians and logicians from 60-plus research institutions in 19 countries.

“This is the largest experiment ever conducted in the Arctic,” said Jim Bossert, Earth and Environmental Sciences division leader at Los Alamos. “The data collected has the potential to transform our understanding of the way the Arctic is responding to climate change—so important to improving our ability to predict global climate impacts of a rapidly changing Arctic environment.”

The role of the Los Alamos staff will be to support the U.S. Department of Energy’s Atmospheric Radiation Measurement (ARM) program’s science mission on board, maintaining and operating a suite of instruments 24 hours a day, in order to share atmospheric data freely around the world.

ARM takes measurements around the world to improve scientists’ understanding of how the Earth’s atmosphere works. Understanding the critical processes that control Earth’s overall radiant energy budget will lead to better computer tools such as models and simulators that can help decision makers address the nation’s energy needs. For MOSAiC, ARM is deploying one of its three mobile facilities. This movable atmospheric observatory will have more than 50 instruments, including complex systems that measure properties of clouds, aerosols (tiny particles in the air), radiation, and precipitation. These instruments will be deployed on the *Polarstern* icebreaker ship and in an ice camp adjacent to the ship.

- Campaign website: <https://www.mosaic-expedition.org/>
- ARM's MOSAiC webpage: <https://www.arm.gov/research/campaigns/amf2019mosaic>