



NATIONAL SCIENCE FOUNDATION  
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**NSF 19-048**

## Dear Colleague Letter: Repurposing the Alaska Transportable Array to Support Observations of Arctic Environmental Change

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March 6, 2019

Dear Colleagues:

Through this Dear Colleague Letter (DCL), the National Science Foundation's (NSF) Section for Arctic Sciences (ARC) of the Office of Polar Programs announces its interest in proposals to repurpose a subset of stations of the Alaska Transportable Array (<http://www.usarray.org/researchers/adopt>). ARC recognizes the potential value of the Array to support observations of long-term environmental change of the Arctic. This DCL encourages proposals to modify and operate a network of stations with a view to provide long-term environmental observations.

In 2019, the Alaska Transportable Array (ATA) project supported by NSF's Division of Earth Sciences comes to its scheduled end. Stations not adopted or repurposed will be decommissioned and removed in 2020. The ATA consists of 280 stations across Alaska and Western Canada operating since 2014. Currently, each station consists of a seismometer; atmospheric sensors, including barometers and infrasound microphones; a GPS sensor; real-time data telemetry; and data loggers all powered by solar panels and batteries. A standard set of meteorological sensors have been installed in about 132 stations (<http://www.usarray.org/alaska#station-design>), and about one quarter of the stations have soil temperature sensors at depths up to 5m. Many of the locations supplement or enhance seismic stations long-supported by the Alaska Regional Network, the Alaska Volcano Observatory, and the Alaska Tsunami Warning Seismic System.

Proposals to NSF should be directed to the Arctic Observing Network (AON) of the Arctic Research Opportunities solicitation ([NSF 16-595](#)) and must follow the guidelines of the NSF Proposal and Award Policies and Procedures Guide (PAPPG) - [NSF 19-001](#)). Proposals should develop the rationale for continuing a subset of the Array stations as an observing network that provides data streams that can be used to understand a variety of phenomena and processes related to the changing Arctic or the functioning of the Arctic system. Proposals may have a limited focus on a specific process and include all the resources to

analyze the data and publish findings. In addition, observations in solid-earth geophysics may continue but are not required. Alternatively, the proposal may serve as a service proposal to maintain and expand the environmental observational data streams, justifying each one by reference to the processes that will be understood, including the trade-off of array density and cost but not including all resources for analyzing each proposed data stream. However, in the case of a service proposal, the awardee would be expected to track the use of data and provide an annual evaluation of data use and the impact of the array.

NSF will not provide further funding to operate or maintain ATA stations at the end of any period of ARC's support.

Logistics will be supported by ARC's logistics contractor (see Arctic Research Opportunities solicitation, [NSF 16-595](#)). Follow instructions for Proposals with Arctic Field Work under the Proposal Preparation Instructions.

Operators would be required to:

- Take over equipment ownership of each station; for stations with components and sensors not owned by NSF or Incorporated Research Institutions for Seismology (IRIS), proposals should explain the shared ownership approach going forward;
- Assume permitting for each station location;
- Provide station operation and maintenance;
- Place environmental data immediately into an appropriate data system in accordance with ARC/OPP data policy;
- Provide any real-time seismic and other solid-earth geophysics data, if collected, to the Seismological Facility for the Advancement of Geoscience (SAGE) Data Management Center;
- Prepare a plan for removal of each station at the end of the award in the event that there is not a continuation.

To get information on the specific costs, condition, capabilities, and a full list of equipment ownership titles at each station, please contact Dr. Margaret Benoit, SAGE Program Director ([mbenoit@nsf.gov](mailto:mbenoit@nsf.gov), 1-703-292-7233). To discuss ideas for new awards to support Arctic environmental observations, contact Dr. Roberto Delgado, AON Program Director ([robdelga@nsf.gov](mailto:robdelga@nsf.gov), 1-703-292-2397).