



National Science Foundation
4201 Wilson Boulevard
Arlington, Virginia 22230

NSF 16-130

Dear Colleague Letter: Big Data For The Geosciences - Calling Attention to Big Data Challenges in the Geosciences

August 31, 2016

Dear Colleague:

The Arctic region is undergoing rapid environmental change, with far-reaching implications for oceanic, terrestrial, and atmospheric systems and for communities in all the Arctic nations. Because of the many scientific and logistical challenges involved in Arctic research, the National Science Foundation (NSF) promotes international scientific collaboration as a means of increasing scientific progress and enhancing access for US researchers to the Arctic.

The National Science Foundation (NSF) entered into an agreement with the Swedish Polar Research Secretariat (SPRS) to increase access to the Swedish Icebreaker ODEN for joint research cruises to include oceanography, marine geology and geophysics, atmospheric and sea ice studies and other research. NSF and SPRS co-sponsored a workshop hosted by SPRS to discuss near-term and long-term joint research interests. The [workshop report](#) is available on the SPRS website. A pilot study was carried out in 2015 on a 34-day research cruise to understand paleoceanography of the Petermann Glacier in northern Greenland.

This Dear Colleague Letter provides guidance for U.S. scientists who will request support from the Office of Polar Programs (OPP) to conduct research on a second research cruise planned for 2018. Swedish research projects are likely to support efforts outlined in the Swedish Road Map for Polar Research. U.S. investigators should propose studies consistent with the Arctic Research Opportunities solicitation to be performed from the ODEN working in the eastern Arctic Ocean or other areas outside of the Bering, Chukchi and Beaufort seas that are typically serviced by the USCGC HEALY and R/V SIKULIAQ. Proposals that contribute to the Year of Polar Prediction (YOPP) are also appropriate. Please contact Dr. Neil Swanberg to discuss ideas prior to submission and for the most up-to-date information on cruise plans.

PROPOSAL PREPARATION AND SUBMISSION

1. Proposals should be consistent with [research priorities of the Arctic Science Section](#).
2. For NSF's planning purposes, please contact [Dr. Neil Swanberg](#) on or before **November 1, 2016** by email or phone with a brief description of your research goals, work plan, and anticipated collaborative arrangements.
3. After consulting Dr. Swanberg, submit proposals to the appropriate Arctic Science program for the [established deadlines in the Arctic Research Opportunities Solicitation](#).
4. For proposals submitted via FastLane, standard [Grant Proposal Guide \(GPG\)](#) proposal preparation and submission guidelines apply. For proposals submitted via Grants.gov, the *NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines* applies. (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website.)
5. The [GEO Polar Data Policy \(NSF 16-055\)](#) also applies.

6. Collaborative arrangements, if applicable, should be documented in the Supplementary Documents section of the proposal. Letters from U.S. or international collaborators should describe the funding source and status of the request. Logistical collaborations should describe the scope and cost of the logistical support and the source of funding for the logistics, including those organizations whose funding is through the [Arctic Research Support and Logistics Program](#).
7. Include as a Supplementary Document a 1-2 page summary of cruise requirements: location, duration, preferred dates, number of personnel, and equipment and services needed by the cruise. Title this document "Ship Time Request".

MERIT REVIEW AND FUNDING

Proposals will compete for funding with the other proposals submitted to the Arctic Science Section. For further information, please contact [Dr. Neil Swanberg](#).