



National Science Foundation
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Dear Colleague Letter: Clarification of the proposal submission process for the Cascadia Initiative (CI)

The Cascadia Initiative is a project to build an onshore/offshore network of seismic and geodetic stations from Cape Mendocino in California to Cape Flattery in Washington. The network, which will run for several years, is targeted at understanding the structure and processes of this subduction margin, which has a history of large earthquakes every 300-500 years. The Cascadia Initiative is a community experiment: the data will be made freely available as quickly as possible.

Half of the funds were allocated to build 60 ocean-bottom seismometers. These instruments, which are being built by the three Ocean Bottom Seismometer Instrument Pool Institutional Instrument Contributors (IICs), which are Scripps Inst. of Ocean., Woods Hole Ocean. Inst. and Lamont Doherty Earth Observatory. These new instruments will have Trillium Compact seismometers and pressure gauges. A subset of the instruments will be trawl-resistant and will be deployed on the continental shelf.

The first Ocean Bottom Seismometer deployments were begun in late summer 2011. The network configuration and site locations were determined at a planning workshop in Portland, Oregon in October, 2010.

- Workshop: [Cascadia Initiative Workshop](#), Oct. 14-15, 2010
- [Cascadia Amphibious Facility Planning Group report](#) (July, 2009)

Both the onshore and offshore components of the CI are now well underway. The 27 USArray sites have been recording data for ~1 year, the Plate Boundary Observatory (PBO) GPS upgrade to real-time stations is approaching completion, and the first OBS cruise has been completed with two additional cruises scheduled for October-November 2011 to bring the ocean floor deployment to ~60 instruments.

The purpose of this Dear Colleague Letter is to inform the community about where to submit various types of CI proposals and on what time scale.

We have identified three classes of proposals that are important for the success of this first community experiment:

1. Data QC and metadata generation proposals for the offshore OBS data.

The Cascadia Initiative Expedition Team (CIET) has been tasked with implementing the community science plan. The CIET will collect the first year's OBS data from the ocean floor in the summer of 2012. These data will have basic clock drift corrections applied by the Institutional Instrument Centers (IICs), who will also upload the data to the Incorporated Research Institutions for Seismology (IRIS) Data Management Center. The data will then be available to everyone. However, the data will be lacking basic metadata that land-based seismologists are used to receiving from the IRIS Data Management Center (IRIS DMC), including horizontal component orientations and data quality information. Other types of metadata not typically available for on-shore experiments, such as site response information, may also be valuable. As the goal of the CI is to engage a broad community of OCE and EAR scientists, NSF believes it is critical to have this additional metadata openly available to the community soon after collection of the data.

2. Derived onshore/offshore data products.

This second category refers to higher order data products than those included in (1), including data products that integrate onshore and offshore data. Examples include earthquake catalogs, moment tensor solutions, tremor catalogs etc. Generating these higher-order products is challenging as it involves integrating very different types of data from multiple non-uniform networks and therefore requires specific funding for the task. At the same time, it provides first-order information upon which a great deal of science can be done.

3. Science proposals to make use of the CI data (onshore and offshore) to address a variety of questions.

Data are already available from the onshore instruments and will be available from the offshore instruments following the first 2012 cruise, which is currently scheduled for May 2012. Land/Sea proposals may be co-reviewed by Earthscope and GeoPRISMS programs.

Type 1 proposals should be sent to The Marine Geology and Geophysics (MGG) Program in OCE (next deadline is Feb. 15, 2012). It is essential that those wishing to submit contact Dr. Richard Carlson (rcarlson@nsf.gov) PRIOR to submitting their proposal. Failure to do so could result in NSF returning the proposal without review. Type 1 proposals can be supplements to existing awards, or new stand-alone proposals.

Type 2 proposals involving land studies only should be sent to the EarthScope Program (next deadline is July 16, 2012). Earthscope contacts are Greg Anderson and Chuck Estabrook (greander@nsf.gov; cestabro@nsf.gov), who should be contacted prior to submission. Type 2 proposals involving both land and sea should be submitted to the GeoPRISMS program (next deadline is July 1, 2012). Contacts are Bilal Haq (bhaq@nsf.gov) and Jennifer Wade (jwade@nsf.gov) and they should be contacted prior to submission. Alternatively, type 2 proposals involving OBS data can be sent to MGG by February 15, 2012 (with prior approval from Richard Carlson- rcarlson@nsf.gov only.) Type 2 proposals can be stand-alone proposals, or data products may be generated as parts of a Type 3 science proposal.

Type 3 proposals for land work should go to the programs listed above for Type 2. For ocean proposals or land/ocean proposals, there will have to be corrected OBS data and metadata available. For this reason, we do not expect proposals prior to late 2012 and possibly later. Be sure to contact Richard Carlson - rcarlson@nsf.gov prior to submission of these.

It is important to note that many proposals will probably be considered for co-review by GeoPRISMS, Earthscope, and MGG, so prospective submitters should be sure to discuss this possibility prior to submission.

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