Marine Seismic Research Oversight Committee
Committee Report
Patrick Hart (MSROC Chair)

UNOLS 2017 ANNUAL MEETING
Alexandria, VA
Thursday, November 30th

MSROC Timeline

- May 2015: NRC report *Sea Change: Decadal Survey of Ocean Sciences*
- August 2016: NSF Seismic Capabilities Dear Colleague Letter
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NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230

NSF 16-120

Dear Colleague Letter: Provision of Marine Seismic Capabilities to the U.S. Research Community

August 9, 2016

Dear Colleagues:

The Division of Ocean Sciences (OCE) of the National Science Foundation (NSF) is seeking written expressions of interest regarding the provision of marine seismic capabilities to the U.S. academic research community and Federal and state agencies involved with marine seismic research and exploration programs. This DCL is part of OCE's effort to develop a long-term, stable seismic capability.

OCE supports a broad portfolio of marine seismic acquisition methods on research vessels of the Academic Research Fleet. The primary seismic acquisition capability used by the U.S. academic community is currently provided by R/V *Marcus G. Langseth*, a 235-foot vessel owned by the NSF and operated by the Lamont Doherty Earth Observatory of Columbia University (LDEO). On average, the vessel is used by NSF for ~120-150 days per year, with funding from NSF at ~$14M per year, including technical support.

As part of OCE's reply in May, 2015, to the National Research Council's report "*Sea Change: Decadal Survey of Ocean Sciences, 2015-2025*", and via multiple outreach opportunities over the past year, NSF has made clear that the current business, financial, and resultant operational model for R/V *Langseth* is unsustainable. Contractual obligations and current research commitments are continuing to move forward using the vessel. Beyond early calendar year 2018, however, a different business, financial, and/or managerial model needs to be implemented or NSF/OCE is likely to divest from R/V *Langseth* and the vessel would no longer be available to researchers.

As noted in OCE's reply to *Sea Change*, NSF is committed to supporting marine seismic research of high national interest. Accordingly, OCE will continue to accept proposals for experiments that require capabilities such as those currently provided by the R/V *Langseth*……

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MSROC SPECIFIC TASKS LISTED IN THE TERMS OF REFERENCE

(a) Implementation of the Regional Framework Plan

(b) Act to engage and coordinate international participation in the regional framework planning process and to identify international resources that might be available to U.S. researchers. Regularly review the technological information available for use of assets and identify needed updates.

(c) Regularly review the technical capabilities of existing marine seismic assets to ensure they meet the needs of the scientific community, and advocate for upgrades when compelling needs for new capabilities are identified.

(d) Promote the engagement and training of the next generation of marine seismic researchers.

(e) Provide outreach tools and a feedback mechanism to the community, including a forum for input on emerging directions in marine seismic studies

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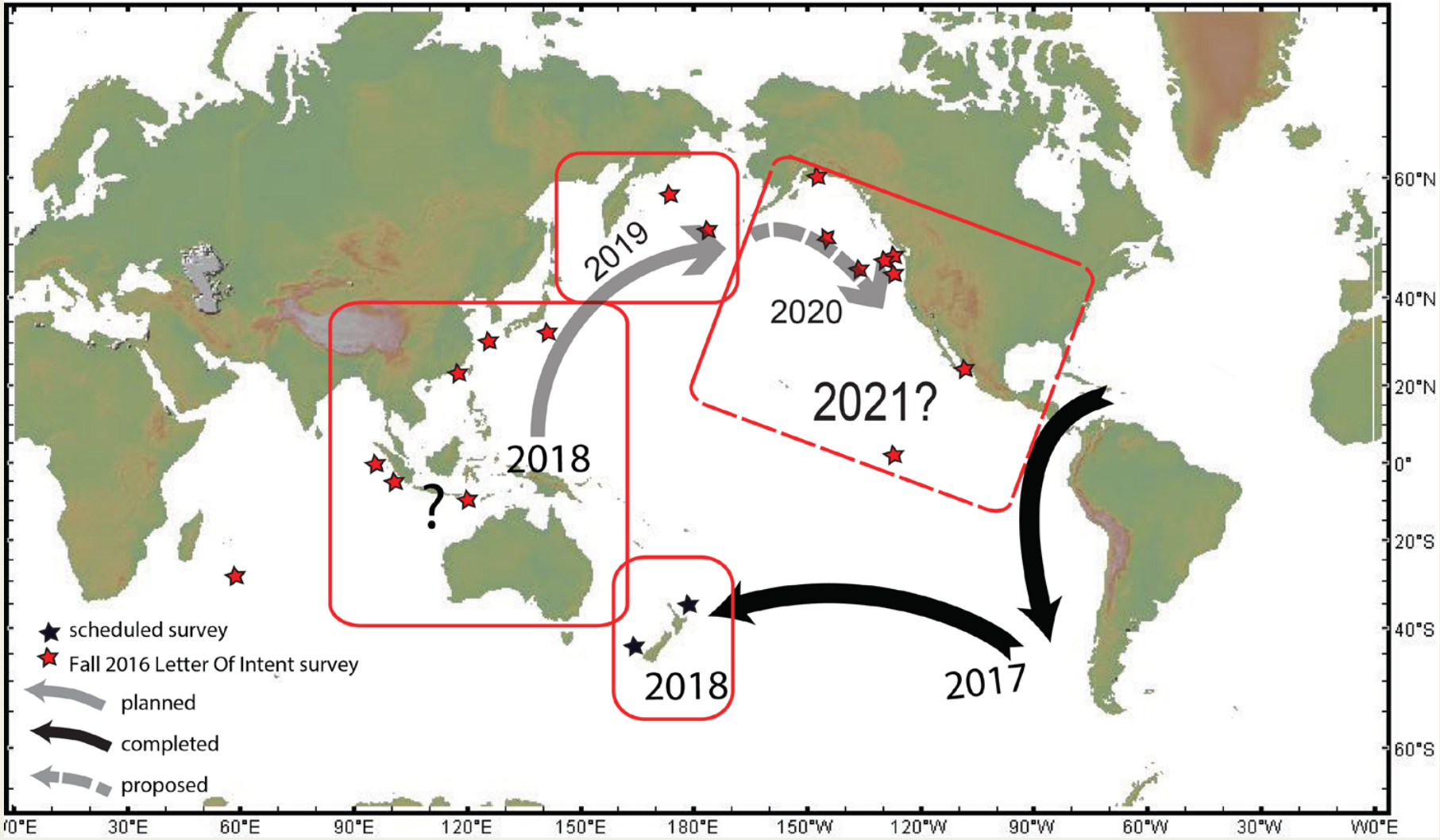
Long-Term Langseth Cruise Track



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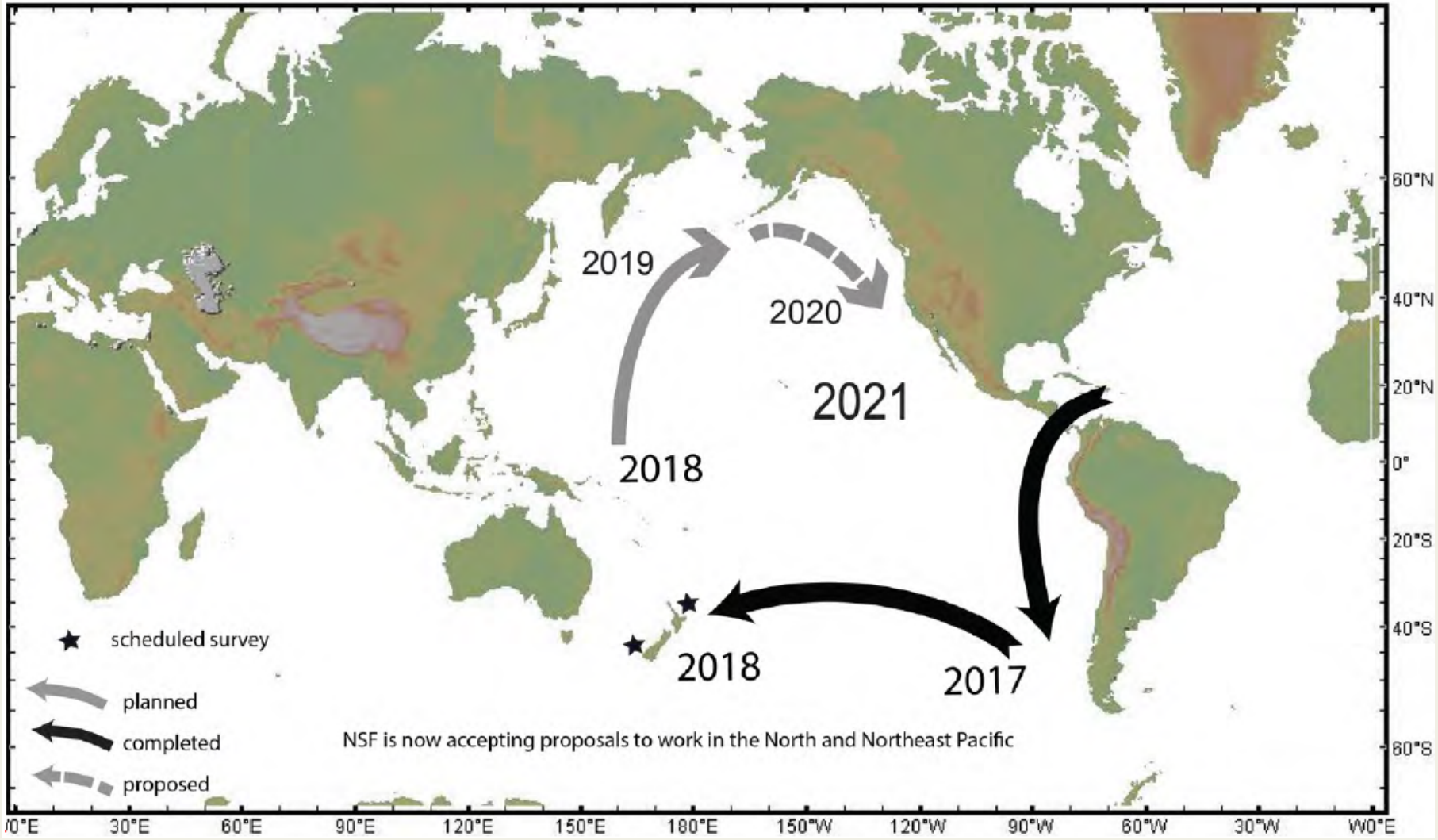

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Sep 14, 2017 **Posted In:** MSROC Updates

The NSF Division of Ocean Sciences (OCE) has advised the MSROC that they have received at least one proposal in response to their Marine Seismic Capabilities Solicitation. Although no details on the proposal(s) can be released until the review process is completed, OCE emphasizes that the marine research community will continue to have access to seismic data acquisition capabilities comparable to those provided by the *R/V Langseth*. NSF encourages the submission of new marine seismic research proposals for North and Northeast Pacific for 2019 and 2020. As stated in the August 2016 OCE Dear Colleague Letter, "*NSF is committed to supporting marine seismic research of high national interest. Accordingly, OCE will continue to accept proposals for experiments that require capabilities such as those currently provided by the R/V Langseth.*"

The MSROC strongly supports OCE's commitment to maintaining access to these marine seismic data acquisition capabilities. It is important to note that the upcoming changes to the current *R/V Langseth* operational model will not impact OCE support of high-resolution seismic acquisition experiments conducted using vessels other than the *Langseth.* Members of the marine research community with concerns or comments regarding the future of marine seismic capabilities should email MSROC at **msroc@unols.org**.

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Marine Seismic Research Oversight Committee
(MSROC) Annual Meeting

Date: Sunday December 10, 2017
10:00 am to 5:00 pm

Location: Quarterdeck- Ballroom "C"- 5th floor
Hilton New Orleans Riverside,
2 Poydras St.
New Orleans, LA

AGENDA

9:30 – 10:00 AM: Coffee

10:00 – 10:15 AM: Introduction and meeting overview (Pat Hart)
- MSROC overview
- Meeting goals

10:15 – 10:45 AM: NSF Briefing and discussion (Maurice Tivey)
- NSF Seismic Capabilities Solicitation
- NSF OBS Solicitation

10:45 – 11:00 AM: UNOLS Update (Jon Alberts)
- UNOLS office recompetition

11:00 – 11:30 AM: L-DEO Update and discussion (Sean Higgins)

11:30 – Noon: IODP and MSROC (Sean Gulick)

Noon – 1:00 PM: Lunch (not provided)

1:00 – 1:15 PM: OBSIP (Del Bohnenstiehl)
- Update from OBS Symposium

1:15 – 1:30 PM: Alaska Amphibious Community Seismic Experiment - Marine Seismic Community Update (Emily Roland)

1:30 – 1:45 PM: New Zealand Langseth Programs (Nathan Bangs)

1:45 – 2:15 PM: Regional Framework and International tasks discussion (Pat Hart)
- Letters of Interest for seismic programs using capabilities similar to the Langseth

2:15 – 2:45 PM: Growing experience with high-resolution 3D marine seismic in research and industry (Tip Meckel)

2:45 – 3:00 PM: USGS Coastal and Marine Geology high-resolution marine seismic capabilities (Maureen Walton)

3:00 – 3:15 PM: Marine Seismic Assets task discussion (Pat Hart)

3:15 – 3:30 PM: Break

3:30 – 3:45 PM: Seismic Data Acquisition Training Cruise for Early Career Scientists (Anne Trehu)

3:45 – 4:00 PM: Training and Outreach task discussion (Pat Hart)

4:00 – 5:00 PM: Revisit earlier topics / open discussion (Pat Hart)

5:00 PM: Adjourn meeting

Additional slides

MSROC Membership

Nathan Bangs*, UT Austin
Donna Blackman*, SIO (ex-officio)
Del Bohnenstiehl, NCSU
Sean Gulick, UT Austin (ex-officio, IODP Liaison)
Patrick Hart, USGS, CA (Chair)
Sean Higgins, L-DEO, (ex-officio)
John Hopper, Geological Survey of Denmark and Greenland
Daniel Lizzaralde*, WHOI (ex-officio)
Beatrice Magnani*, S. Methodist U., TX
Emily Roland, UW
Donna Shillington, L-DEO, (ex-officio)
Joann Stock, CalTech
Anne Tréhu, OSU
Warren Wood*, NRL Stennis

Provision of Marine Seismic Capabilities to the U. S. Research Community

PROGRAM SOLICITATION
NSF 17-563

National Science Foundation

Directorate for Geosciences
Division of Ocean Sciences

Full Proposal Deadline(s) (due by 5 p.m. submitter's local time):

August 21, 2017

IMPORTANT INFORMATION AND REVISION NOTES

Any proposal submitted in response to this solicitation should be submitted in accordance with the revised *NSF Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 17-1), which is effective for proposals submitted, or due, on or after January 30, 2017.

SUMMARY OF PROGRAM REQUIREMENTS

General Information

Program Title:

Provision of Marine Seismic Capabilities to the U. S. Research Community

Synopsis of Program:

Proposals are solicited to support needs of the marine seismic research community that are currently provided by the specialized seismic research vessel R/V *Marcus G. Langseth*. The vessel is owned by the National Science Foundation and operated by the Lamont Doherty Earth Observatory of Columbia University (LDEO). NSF has determined that the current operational model is unsustainable and, with this solicitation, seeks proposals that provide comparable access to marine seismic capability through innovative approaches to R/V *Marcus G. Langseth* use or by other means.

The successful proposal will be administered as a Cooperative Agreement over the five-year period of performance.

Cognizant Program Officer(s):

Please note that the following information is current at the time of publishing. See program website for any updates to the points of contact.

- Bob Houtman, telephone: (703) 292-8583, email: bhoutman@nsf.gov
- Candace Major, Program Director, Marine Geosciences Section, telephone: (703) 292-7597, email: cmajor@nsf.gov
- Richard Murray, Division Director, Ocean Sciences Division, telephone: (703) 292-7240, email: rwmurray@nsf.gov

Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):

- 47.050 --- Geosciences

Award Information

Anticipated Type of Award: Cooperative Agreement

Estimated Number of Awards: 1

Anticipated Funding Amount: $50,000,000

$50 million total for five years at $10 million per year. Amount is subject to the availability of funds

UNOLS
UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

Marine Seismic Research Oversight Committee (MSROC)
Patrick Hart
U.S. Geological Survey
MSROC Chair
msroc@unols.org

November 16, 2017

To: Marine Seismologists,

The MSROC is requesting Letters of Interest from the marine seismic research community regarding proposals for experiments that would utilize seismic data acquisition capabilities similar to those currently provided by the *R/V Langseth*. One year ago, the Marcus Langseth Science Oversight Committee (MLSOC) distributed a similar request and the responses were instrumental in updating the *Langseth* regional framework plan initially released in the spring of 2015. There have been two significant developments (below) that have potential to affect the regional planning, but new and updated Letters of Interest are a key way for marine seismologists to help shape regional scheduling that NSF may consider.

The posted Regional Framework Plan is for operations to move from the current New Zealand 2D and 3D projects ending in March 2018 toward the North Pacific by 2019 and into the northeast and eastern Pacific in 2020. There is considerable flexibility within this framework through 2020 and all geographic options are open 2021 and beyond. Even with the uncertainties regarding the new marine seismic operational model, information from the requested Letters of Interest will be essential to scheduling surveys that NSF funds for 2019-2020 and prioritizing geographic regions for the next several years. Please provide the information listed on the next page in your Letter of Interest.

The developments over the past year are as follows:

First, as of March 2017, the MLSOC has been replaced by the MSROC which will provide oversight and advice to NSF and UNOLS for all U.S. academic marine seismic operations in addition to *Langseth* programs. Information regarding MSROC, including terms of reference and membership can be found on the UNOLS MSROC webpage: https://www.unols.org/committee/marine-seismic-research-oversight-committee-msroc

Second, in May 2017, NSF issued a program solicitation for proposals to provide marine seismic data acquisition capabilities comparable to the *Langseth*. These new operational models may continue to use that vessel or may include other capable assets. As stated on the UNOLS MSROC webpage: "*The NSF Division of Ocean Sciences (OCE) has advised the MSROC that they have received at least one proposal in response to their Marine Seismic Capabilities Solicitation. Although no details on the proposal(s) can be released until the review process is completed, OCE emphasizes that the marine research community will continue to have access to seismic data acquisition capabilities comparable to those provided by the R/V Langseth.*" If you are planning a future marine seismic program requiring seismic data acquisition capabilities such as those currently provided by the *Langseth*, please respond to Patrick Hart, MSROC Chair (hart@usgs.gov) with a letter by **December 1, 2017** that includes:

1) Primary contact for the project

2) Geographic location of survey

3) General scientific objectives

4) Are there alternate geographic locations that could possibly meet your scientific objectives?

5) Type of survey (e.g. 3D seismic reflection, long-offset 2D seismic reflection, OBS refraction ….)

6) Estimated number of days on site for the survey

7) Whether PI/team is solely US, collaborative US & international, or solely non-US (all of these are welcome, we expect input from each of these types of group, and there is no preference)

8) Proposal status (discussion stage, draft proposal written, proposal submitted, proposal recommended for funding, etc.)

9) Timing considerations (coordinating with other programs, etc.)

10) Would you like to present a 3-minute summary of the project to MSROC at the pre-AGU meeting?

This information will be used to guide the advice that MSROC provides to NSF about how the regional plan could be updated to best serve current science interests. Our intent is to evaluate options in a public forum so, while we strongly encourage your input, this means that the information you provide will not be kept confidential. We request these letters on a voluntary basis as primary input for regional planning only. They are not required for proposal submission. The areas, scope of work, and any convergence of interests conveyed in the letters will be discussed in open session at the MSROC fall meeting on Sunday Dec. 10th in New Orleans the day before AGU.

For more information, please contact Patrick Hart, (hart@usgs.gov).