UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

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30 March 2011

To: NSF/OCE- Linda Goad, Bob Houtman, Matt Hawkins, Rodey Batiza, Rick Carlson
From: Marcus Langseth Science Oversight Committee-(MLSOC)
Cc: MLSOC, Council
Re: MLSOC Committee Recommendations to NSF

Dear Linda, Bob, Matt, Rodey and Rick,

The Marcus Langseth Science Oversight Committee, (MLSOC) met in San Diego on
Oct 24-25, 2010 and again at AGU on Dec 12, 2010. From these meetings as well as
the Incline Village Workshop a set of recommendations were developed. They have
voted to adopt the following recommendations and are requesting NSF's review and
comment on this document.

In following the UNOLS Charter, these recommendations were reviewed by UNOLS
Council on Monday March 7, 2011 at the Council meeting held at NSF. The UNOLS
Council approved these for submission by the UNOLS Office to NSF.

On behalf of the Council & MLSOC, thank you for your consideration of these
recommendations. These committees look forward to your thoughts and decisions.

Thank you

Jon Alberts
UNOLS Executive Secretary

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MLSOC RECOMMENDATIONS

Data Access and Availability

MLSOC endorses a model that includes three classes of data access:

- **Community programs**. This category includes large programs that, by virtue of their broad interest, are most appropriately planned by a wide community, e.g. in thematic workshops. Community programs will produce rapidly processed, open-access data for full release to the community; funding for data analysis would be disbursed through a separate round of proposals. Many (or most) 3D programs will likely fall into this category. An analog for this model might be NSF's EarthScope program.

- **Open-access programs**. These programs, which combine elements of the PI-driven and community models, will stem from proposals written by small groups of PI's, but will produce rapidly processed, open-access data for full release to the community. Funding for data analysis would be disbursed through a separate round of proposals. This would be an entirely new data model.

- **PI-driven programs**. This category describes the current modus operandi of our community: PI-driven projects, with exclusive data rights for PI's within a moratorium period (currently two years). An analog in the onshore seismic community is PASSCAL experiments.

Advanced Planning Cycle:

MLSOC endorses an advanced planning cycle in which proposal calls are issued on a regional basis (e.g., North Atlantic, eastern Pacific) several years in advance. MLSOC will work with the user community, NSF and the facility operator to determine the ship's projected areas of operation, guided by Letters of Intent, as described below.

Dedicated Langseth panel:

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MLSOC offers as a suggestion that NSF consider a separate panel for judging R/V Langseth proposals, especially in the context of a new NSF program to fund research using the facility.

Letters of Intent:

MLSOC endorses adoption of a planning letter process for work proposing to use the R/V Langseth facility.   Letters of Intent are not required by NSF but are strongly encouraged by MLSOC in order to aid geographical planning for future ship operations. Letters of Intent imply a firm commitment on the part of the proponents to submit a full proposal. Letters of Intent will be received by MLSOC. The committee will review Letters of Intent for technical feasibility, provide feedback to users regarding logistical planning, and compile proposed sites in order to help project future areas of operation of the vessel over the next ~3 years.   Letters of Intent should include descriptions of the proposed area of operation, type of proposed data access (e.g., Community, Open-Access, or PI-driven), prospective funding agency, approximate number of ship days required, equipment required (e.g., OBS only, 3D seismic, etc.), size of prospective science party, constraints on time of year (weather windows, protected species issues), proposal deadline to which proponents commit to submitting a full proposal, and links to other scientific programs or facilities (e.g., GeoPRISMs, IRIS, IODP, OBSIP).

Letters of Intent will be due Nov. 1 in every calendar year. MLSOC will present an overview of the geographical distribution of prospective work at its annual town hall meeting at the December AGU.

Training the Next Generation:

MLSOC endorses including a strong training component on all Community and Open-Access projects, in which science berths are open to scientists wishing to gain at-sea experience on R/V Langseth.

MLSOC endorses, wherever practical, reserving 1-2 berths on each R/V Langseth cruise for early-career scientists via an open application process. MLSOC will accept letters of interest from prospective early-career participants and work with PI's of scheduled Langseth cruises to match participants with cruises.

MLSOC endorses lowering barriers to facility access through creation of a user "cookbook." This manual, which shall be hosted on the Langseth website, should include instructions and tools for survey design, what to expect at sea, shipboard data processing instructions, and a community archive for advice and instructions on

post-cruise data analysis and access.

Data Processing:

MLSOC endorses commercial processing for all 3D cruises. The intent of commercial processing is to rapidly produce an interpretable data volume, as well as intermediate products that will enable proposals for further analysis. The particular processing products (e.g., true-amplitude, prestack time migration) should be project-specific and reflect the scientific objectives of the project. It is expected that project PI's will provide advice and oversight during commercial processing, to ensure that project objectives are met. A similar option for commercial processing of 2D data should be available. We recommend that NSF explore establishing a long-term contract with a commercial processing house to lower processing costs.

Improving the Educational Footprint:

MLSOC endorses (1) expansion of the Langseth website with a focus on public outreach and education, (2) K-12 presence through teacher workshops and teacher-at-sea programs, (3) a "Distinguished Ambassador" program to visit K-12 schools, (4) use of social networking sites to communicate Langseth activities and results to interested parties, (5) exploring use of Langseth transits for training/education cruises, and (6) training of undergraduate and graduate students in use of open-access 3D interpretation software to bring Langseth 3D data into college classrooms and graduate-level research programs.