

**MLSOC Early Career Scientist Workshop**  
**Saturday, December 7, 2013**  
**JW Marriott**  
**515 Mason Street**  
**San Francisco, California 94102 USA**  
**Skyline Room C**

Workshop Notes

On Saturday, December 7, 2013 the UNOLS Office with support from NSF and ONR, hosted an early career workshop in San Francisco, CA. The focus of this workshop was to introduce early career scientists to various facets of conducting marine seismic research through the use of the National Oceanographic Seismic Facility (NOSF). This workshop brought together early career scientists, federal agencies representatives, members of the Marcus Langseth Science Oversight Committee, (MLSOC), Lamont-Doherty Earth Observatory marine operations personnel, and the UNOLS staff in a workshop setting. This is part of the UNOLS ongoing efforts to introduce early career marine researchers to various national facilities and to assist them in developing their careers. The workshop was attended by thirteen early career scientists from around the United States.

We began with a session titled: “How things work” and had presentations by UNOLS (Jon Alberts/UNOLS), Marcus Langseth Science Oversight Committee, MLSOC (Dale Sawyer/Rice & MLSOC Chair), National Science Foundation, (Donna Blackman/NSF & Jim Holik/NSF) and the Ocean Bottom Seismometers Facility, (Brent Evers/IRIS)

The common theme on this section focused on the key steps necessary to developing and carrying out a successful program at sea. Four main areas were covered in this session.

- ✓ Jon Alberts explained the history of UNOLS, organizational structure, the UNOLS fleet of ships, and the various committees which all work at improving the access to the sea. The UNOLS ship time request system was also covered in detail.
- ✓ Dale Sawyer as Chair of the MLSOC explained the purpose of this advisory group and how they can help the community with the use of the facility.
- ✓ Donna Blackman/NSF reviewed the process of developing a proposal for ship time as well as using existing data sets and the various funding models that can be used. She explained the scheduling process, importance of cruise planning, post cruise reporting requirements and the data policy. Jim Holik/NSF explained the technical support side of NSF.
- ✓ Brent Evers/ IRIS presented on The Ocean Bottom Seismometer Instrument Pool, <http://www.obsip.org/>. There are three instrument centers, based at Scripps Institution of Oceanography, Woods Hole Oceanographic Institution and Lamont-Doherty Earth Observatory with approximately 253 instruments. The OBSIP pool of instruments is

scheduled in close collaboration with the UNOLS office and each scheduler at the UNOLS institution.

The second part of the workshop was an extensive review of the National Oceanographic Seismic Facility and the R/V Marcus Langseth. This session was led by Sean Higgins, Director of Marine Operations at L-DEO. This presentation covered the history of ships at Columbia University's L-DEO, the capabilities of the ship, the equipment required for collecting marine seismic data, environmental compliance issues, as well as details on past projects that have been carried out aboard the R/V Marcus Langseth.

The third part of the workshop covered technical support and cruise planning. This session was led by Jeff Rupert, Robert Steinhaus, and David Martinson. This group from the L-DEO's Office of Marine Operations provided an extensive overview of the R/V Marcus Langseth, in particular the ship's technical capabilities, cruise planning and pre-cruise meetings, as well as how the navigation systems work on the ship and the deployment of streamers. Data Acquisition systems were covered as well as processing requirements.

The workshop then covered data and the collection of at sea data and using this data ashore. Nathan Bangs from the Institute for Geophysics at the Univ. of Texas/Austin and a member of the MLSOC committee provided an informative presentation of two recent cruises he has been working on. This included the CRISP project off Costa Rica and a project off of Japan. This presentation provided a real world view to the early career scientists of the great research which this facility can provide.

Dave Scholl/University of Alaska/Fairbanks covered some recent cruises in the Bering Sea which were funded by USGS. Highlights of the data collected were presented as well as the importance of having backup plans in place in case they are required.

We then changed gears and looked at funding models in greater details. Again, Donna Blackman/NSF led the discussion and covered three different types of funding models and the pros and cons of each. These are individual principal Investigators model, the open access model and the community-driven experiment

The workshop concluded with a question and answer period and a general discussion. We adjourned at 5pm and then reconvened for a social hour, a group dinner with the Deep Submergence early career participants and a talk by Dr. Charles Paull from MBARI titled "Sea Floor Imaging" .

A post workshop survey has been distributed which will help the UNOLS office make improvements to future workshops. We will also add these early career participants to our listserves as we continue to track them in their careers.

Jon Alberts/UNOLS  
18 December 2013