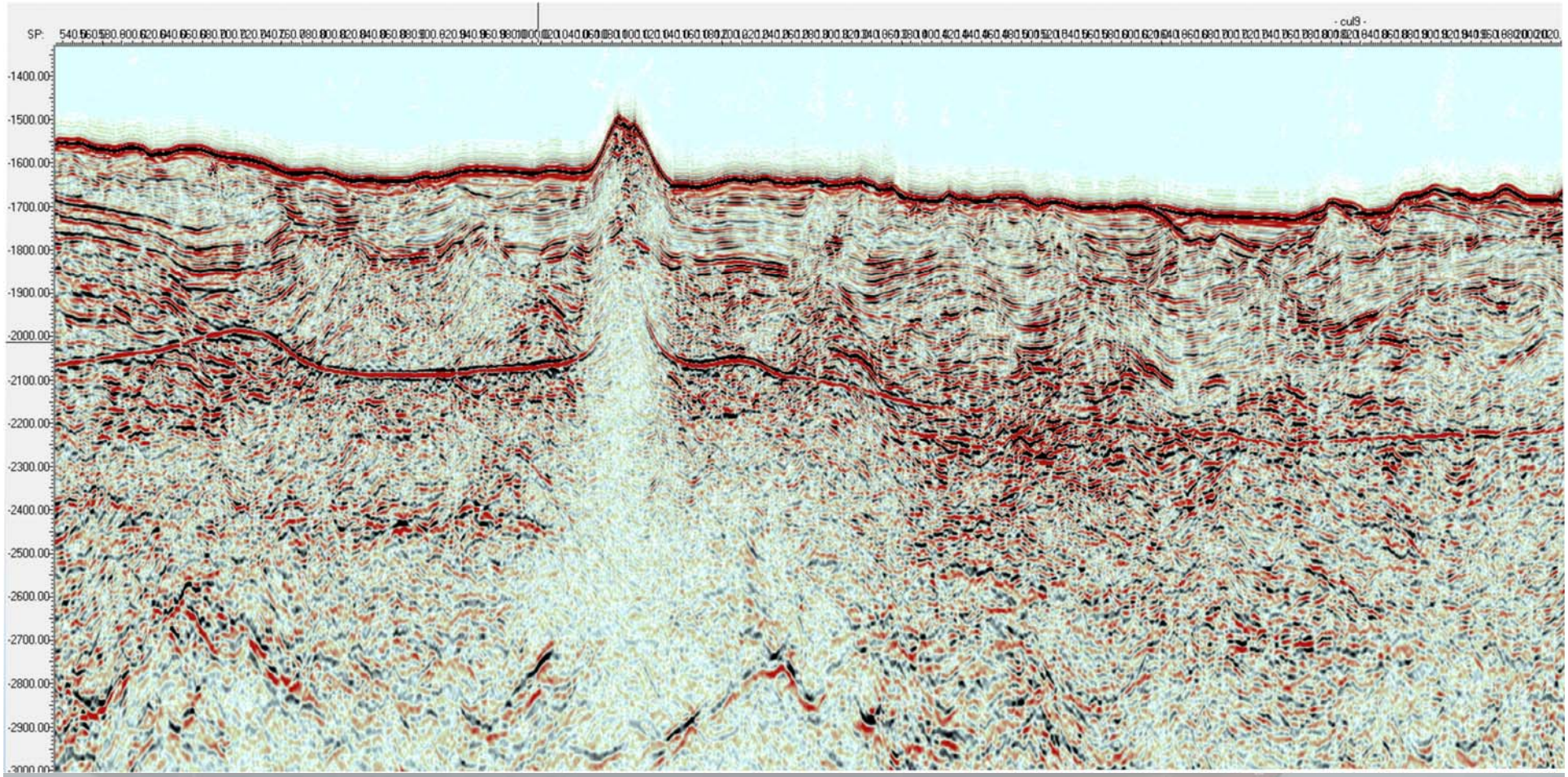
Langseth Successes

- Nine cruises so far; **all successful**
- First multi-streamer 3D cruise summer 2008
- Long 2D streamer (8 km)
- High-resolution source
- Quality shipboard technical staff

Langseth Successes

Mound Culebra Line 9: Prestack Depth Migrated

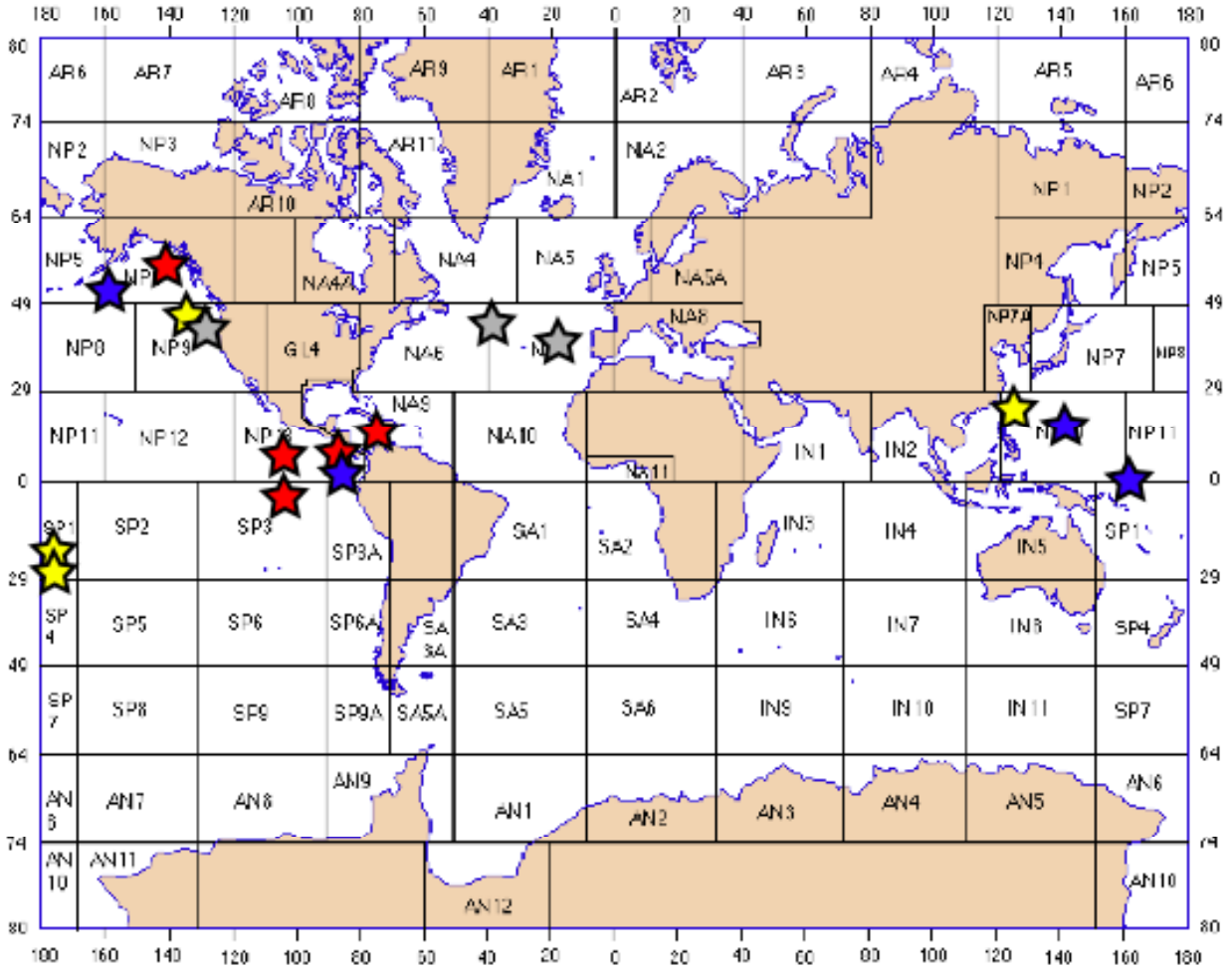


"Fantastic cruise. Memorable. Lots of respect for the ship and its personnel."

Langseth Challenges

- Expensive ($84K/day 3D, $67K/day 2D)
- Few projects funded (~4/year)
- Long transits (increases day rate)
- Long waits for ship access
- Few young investigators (shrinking community)

R/V Langseth cruises
2008 -2010



Workshop, March 2010: "Challenges and Opportunities in Marine 3D and 2D Seismology"

Holbrook and Kent, co-conveners

GOALS

1. What are exciting science opportunities that, over the next decade, will require a healthy *Langseth* facility?
2. How can process of soliciting, evaluating, funding, and scheduling work on *Langseth* be improved?
3. What modes of data access might help put *Langseth* products into more scientists' and educators' labs and schools?

Workshop, March 2010

Build community consensus on:

- Science opportunities ("glossy brochure")
- Expanding user base and access to Langseth
- Long-term forecasting of operation areas
- New models of science planning and proposal evaluation
- Improving access to, and impact of, marine seismic data

Workshop, March 2010

Workshop Products

1. Report to NSF summarizing the deliberations of the workshop, including items of consensus and contention.
2. Ten-page "glossy brochure" describing science opportunities for active-source marine seismology over the next 1-2 decades.
3. Two-page implementation plan for new model of operation.

Workshop Timeline/To-Do List

1. Formation of a Workshop Steering Committee (by Jan. 4).
2. Solicitation of "one-pagers" from the community (by Jan. 8)
3. Advertising: EOS, *AAPG* Expl, Leading Edge, *GSA* Today (by Jan. 8)
4. Solicitation of keynote speakers (by Jan. 15).
5. Direct email and phone invitations of potential participants (ongoing).
6. Designating pre-assigned roles (breakout leaders, scribes, discussion leaders) (by Feb. 8).

Preliminary Workshop Announcement

Workshop Announcement

Challeges and Opportunities in Academic Marine Seismology

March 21-24, 2009; Incline Village, NV

Co-conveners: W. Steven Holbrook, Graham Kent, etc etc

As a community, we are entering a time of unprecedented opportunity for marine seismology, with the new 3D capabilities of the R/V Langseth (http://www.ldeo.columbia.edu/res/fac/oma/langseth/index.html), which has completed its second year of successful operations. The capabilities of this facility will enable key scientific advances. However, along with these new opportunities come new challenges, including the high cost of 3D seismic acquisition, the difficulty of forecasting areas of operation, and ensuring broad community access to the data produced by the facility. We will convene a workshop to discuss the future of academic marine 3D and 2D seismology, with a focus on (1) defining the exciting science goals that, over the next decade, will require a healthy Langseth facility, (2) improving the process of soliciting, evaluating, funding, and scheduling work on the Langseth, and (3) developing modes of data access that will maximize the availability and usefulness of Langseth products in more scientists' and educators' labs and schools.

To apply to participate, please visit: http://... Participants are asked to consider submitting a one-page "white paper" describing future areas of interest for marine seismic work.

Partial travel support is available for U.S.-affiliated participants.

For further information, please contact: Steve Holbrook (steveh@uwyo.edu) or Graham Kent (gkent@seismo.unr.edu)

Submission Deadline: February 8, 2009

Workshop, March 2010

Workshop Agenda (prelim)

Saturday, March 20

Evening — Steering Committee arrives; final adjustments to agenda.

Sunday, March 21

Day — Resort Transportation to Diamond Peak

Afternoon — 3D Seismic Processing/Visualization Short Course (3-7 PM)

Evening — Icebreaker with Drinks and Appetizers (7 PM; 90 minutes)

Dinner; Open—enjoy restaurants at the Hyatt or nearby

Monday, March 22

Hot Breakfast — Provided [60 minutes; 7:30 AM]

Morning — Welcome; Goals of Meeting [8:30 AM start; 15 minutes]

NSF Opening Remarks; Budgetary Issues, Data Access and Opportunities—Rodey Batiza [15 minutes]

Review Academic 3D Successes; *Ewing*, *Langeth* & others *(Barbados, ARAD, Nankai, Hydrate Ridge*, [60 minutes]

—break— [15 minutes]

Workshop, March 2010

Blake Ridge, SISMOMAR, Langseth EPR) [45 minutes]

Highlight Recent *Langseth* Operations [90 minutes]
(e.g., Costa Rica, Southern EPR, St. Elias, Lau Basin, Taiwan, Endeavor)

Lunch — Provided [60 minutes]

Afternoon — Reconvene; Highlight 1-page 3D Future Cruise Plans [1:30 PM]
(e.g., breakout via ocean basin; Atlantic, Pacific and Indian)
Session #1: First group of 12 Mini-Proposals [60 minutes]

Breakout Session #1 — Community Access to Langseth Data
(two co-chairs per breakout group) [60 minutes]
"EarthScope Model" for Community Access vs. Status Quo; Other Models
— Efficient Ship Scheduling
— MG&G Panel vs. Separate Panel

—break— [15 minutes]

Panel Discussion of Access, Scheduling and Panel Breakout groups [60 minutes]

Dinner — Sit-Down Dinner (Lakeside Room) [6:30 start]
—Special Guest Speaker: Dr. Charles Goldman
Renowned Limnologist

Posters — After Dinner Poster Session (60 minutes)

Workshop, March 2010

Tuesday, March 23

Hot Breakfast — Provided [60 minutes; 7:30 AM]

Morning — Welcome; Introduce Keynote Speakers—Themes
[8:30 AM start; 20 minutes each]

- Future in 3D Ridge Studies
- Future in 3D Subduction Studies
- Future in 3D Oceanic Crustal Studies
- Future in 3D Fault Structure/Interaction Studies
- Discussion [40 minutes]

—break— [15 minutes]

Highlight 1-page 3D Future Cruise Plans [10:45 PM]
(e.g., breakout via ocean basin; Atlantic, Pacific and Indian)
Session #2: Second group of 12 mini-proposals [60 minutes]

Lunch — Provided [60 minutes; Noon]

Afternoon — Reconvene; Highlight 1-page 3D Future Cruise Plans [1:30 PM]
(e.g., breakout via ocean basin; Atlantic, Pacific and Indian)
Session #3: Last Group of 12 Mini-Proposals [60 minutes]

Breakout Session #2 — 3D Data Processing/Interpretation
(two co-chairs per breakout group) [60 minutes]
— Process 3D Data In-House vs Commercial
Technical Hurdles for In-House Processing/Interpretation
— Technical Issues for Education Uses

Workshop, March 2010

—break— [15 minutes]

Panel Discussion of Processing/Interpretation breakout groups [60 minutes]

Dinner — Open—enjoy restaurants at the Hyatt or nearby

Posters — After Dinner Poster Session (90 minutes; 7:30 PM)

Wednesday, March 24

Hot Breakfast — Provided [60 minutes; 7:30 AM]

Morning — Review [30 minutes; 8:30 AM]

Breakout Session #3 — 2D Data Seismic Acquisition/ OBS operations
(two co-chairs per breakout group) [60 minutes]
— Long Streamer Offset (8-12 km) Work
— 2-D/OBS Operations; Different Data Policies vs. 3D
— Physical Oceanography and Other Non-Traditional Uses

Lunch — Open—return to Reno-Tahoe Airport

MLSOC Rotations

Target membership: 9 members

Current Membership:

1. Steve Holbrook
2. Graham Kent
3. Nancy Grindlay
4. Ray Schmitt
5. Mike Enachescu
6. Mitch Lyle
7. Paul Johnson

- OFF: Tom Shipley, Peter Tyack, Peter Littlewood
- NEED: 2 immediately; begin staged rotations

MLSOC Rotations

- 4 Nominees:
  - Nathan Bangs (UTIG)
  - Will Sager (TAMU)
  - Dave Scholl (Univ. Alaska, Fairbanks)
  - Sandy Shor (Hawaii)