

**NSF Seismic Workshop  
September 30 & October 1, 2015  
Holiday Inn- 4610 N. Fairfax, Arlington, VA**

**Wednesday September 30**

**MORNING Day 1**

Continental Breakfast

Welcome: Rick Murray, NSF Division Director for Ocean Science

- 1) Introduction (30 minutes) Jim Holik
  - Why are we here?
  - What does NSF expect from this workshop?
  - What's NSF's view of MCS and OBS support?
  
- 2) Science Imperatives for future MCS Capability
  - Basic considerations for seismic imaging (Bangs, 20 min.)
    - Source
    - Receivers
    - 2D vs 3D
  
  - Science goals and facility needs.  
What have been the critical capabilities for past success and what will be needed in the future?
    - Spreading centers (20 min presentation) Carbotte/Canales/Nedimovic
    - Passive/Rifted margins (20 min) Sawyer/Hutchinson/Mountain/Reece
    - Subduction zones (20 min) Shillington/Bangs/Silver
    - Intraplate or other (20 min) Lizarralde/Canales/Reece
  
  - Discussion: Common needs and prioritization. (1 hr)  
What have been and will be the most important capabilities for all scientific goals?
    - Equipment
    - Personnel/technical expertise
    -
  
- **Lunch- On your own**

**AFTERNOON -Day 1**

**Portable System Alternatives and Capabilities**

- 1) Existing Portable Systems (45 minutes)
  - What's "portable" mean?
  - What's typical size or scale? Footprint, containers, etc. Limitations?
  - What are typical vessel characteristics?
  - How much support is "built-in"
  - Personnel support
  - What works well?
    - Spain, Cesar Ranero
    - Germany, Michael Schnabel/Heidrun Kopp
    - Taiwan or others
  
- 2) Glostén Report (1 hours)
  - What is possible to put on a Global ship (AGOR 23/24)?

- What is realistically “portable” in terms of:
  - Streamer length
  - Air compressors (size and footprint)
  - Source (volume and configuration)
  - System footprint
  - Ship Systems
    - Electric
    - Power (bollard pull)
    - Fuel consumption
    - Stability

### 3) Impacts of Portable System Mode of Operations (45min)

- Personnel to operate
- Cost to Configure and logistics
- Cost to operate (base costs to maintain facility)
- Risks
- Expected Operational Model(s) -e.g. Regional Model?
- Impact on UNOLS Global fleet
- Data Quality
- Science
- Active OBS or combined OBS/MCS projects

## **MORNING -Day 2- Thursday October 1, 2015**

0800 Continental Breakfast

0830 Start

### **MCS Service Industry Discussion (Morning)**

- Who are we talking about in seismic service industry?
  - a) Examples of operators (e.g. Seabird) and their fleets
  - b) What’s happening with industry now and is forecast
- Representative MCS Operator Capabilities (Streamer lengths, sources, other etc)
  - a) Examples from operator vessel fleets for 2D and 3D
  - b) Where does Langseth fit into spectrum of capabilities?
- Availability (Ship availability, Geographic issues, industry variability)
  - a) How to predict?
  - b) Interest in academic projects?
- Costs in current MCS operator market and recent high market
  - a) Operator behavior and response to market changes
  - b) Comparisons of market costs and Langseth
- Selection Process for contractor
  - a) What are the contracting timelines
  - b) Project design
  - c) How do we avoid change orders/standby time
  - d) Who does the contracting?
  - e) Who is responsible for permitting and clearance issues?

**Examples of past industry surveys**

(Nankai, Cost Rica, PG&E --others?)

**Impacts of Industry Only Charters:**

- What are impacts to U.S. community
  - a) How are PIs and students involved in data collection?
  - b) How do we maintain and develop technical expertise?
  - c) How do we support OBS/MCS, multibeam, and other work currently possible on Langseth?

**Long-term Budget Estimates**

- a) How many industry run surveys in 5-year period?
- b) What is NSF Budget for MCS/OBS work in US?

**Lunch**

**AFTERNOON –Day 2**

1400- Wrap-Up and Discussion- Outline for written report

- c) Summary of science requirements
- d) Summary of portable system capabilities
- e) Summary of industry options

Given what we've learned, will either portable systems or industry operators or even a combination satisfy the science requirements in the absence of Langseth?

1530 Adjourn