

L-DEO Office of Marine Operations:  
UNOLS MLSOC Meeting  
December 2, 2012  
AGU Meeting , San Francisco, CA



## Outline:

1. OMO Office Update
2. 2012 Science Schedule and Review
3. 2013 Schedule – Atlantic Ocean
4. Update on Glosten Winch Plan
5. Long Core Study Update
6. SSSE and Ocean Instrumentation  
Proposal Review

## **OMO Office Activities:**

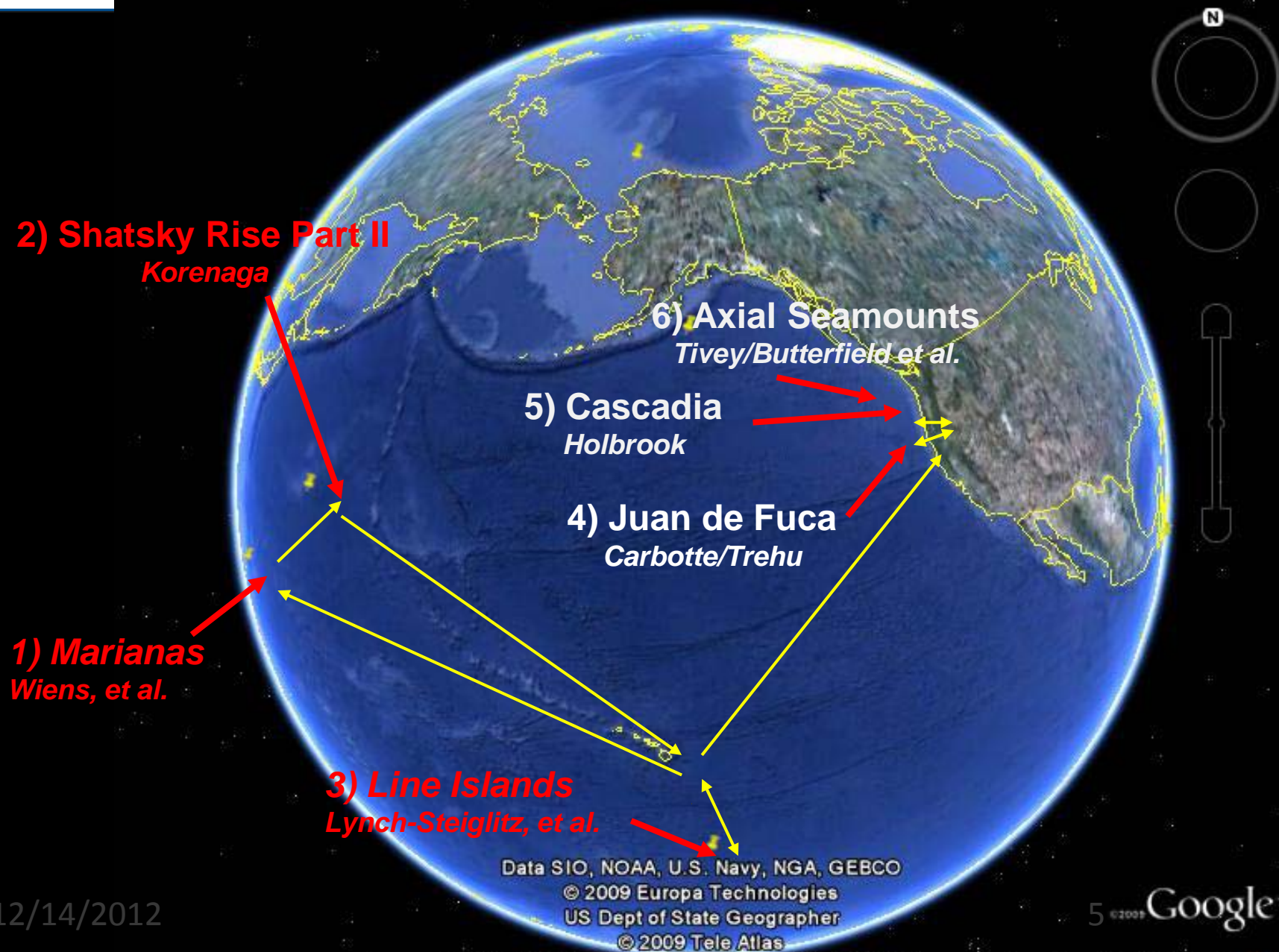
1. Maritime Union Negotiations
2. Export Controls & Technology Control Plans
3. Contracts/Permitting 3<sup>rd</sup> Party Science-PGE &SONGS
4. Investigating other international opportunities:
  - Germany- Seismic surveys – NE Atlantic
  - Canadian Geological Survey- Hudson Bay/Strait
5. Syntrak Spare Electronics shipment completed
6. Discussions with ION and Sercel ongoing

## 2012 Science Schedule (~207 Operating days)

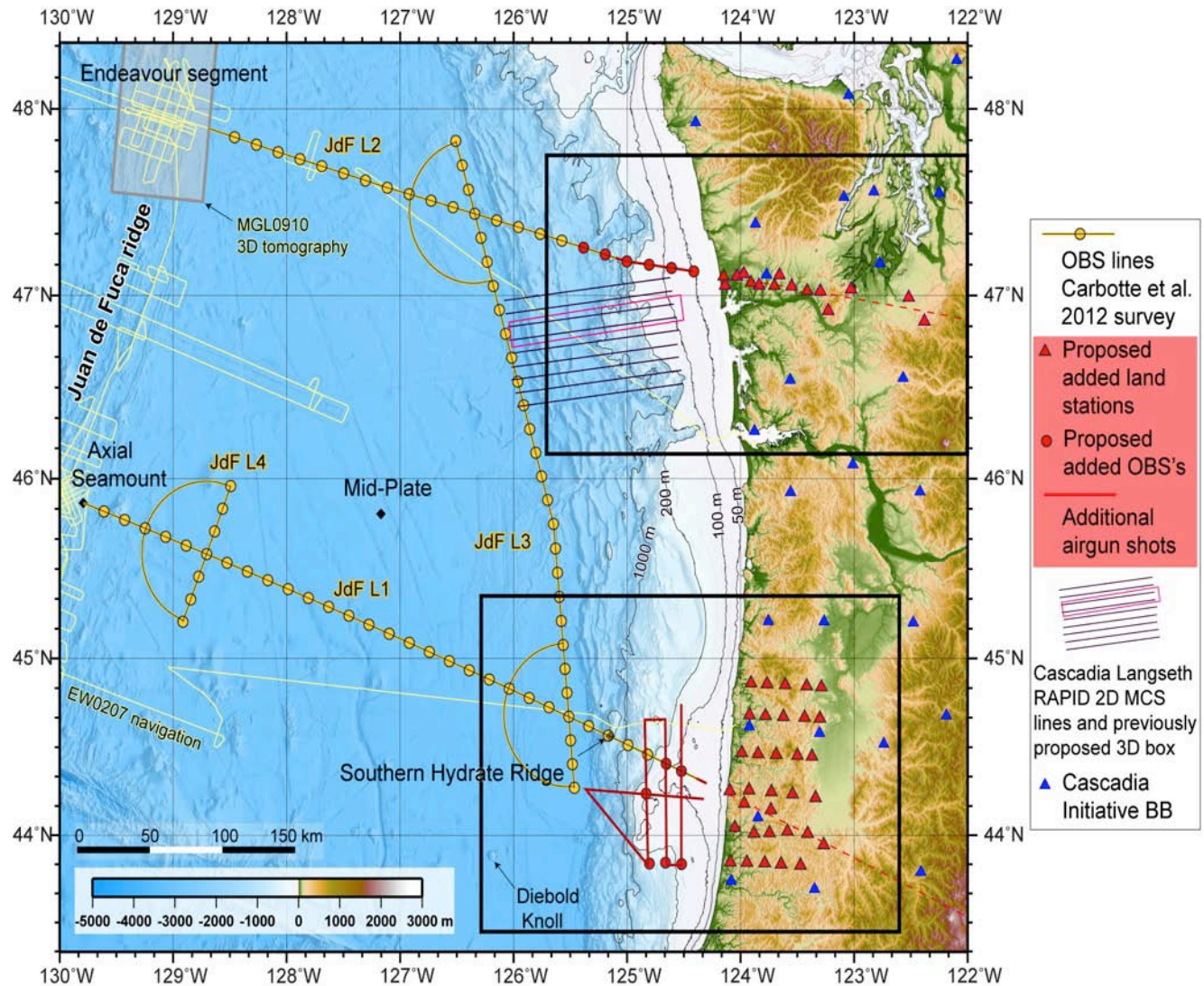
- *January:* Transit to Guam -
- *February/March:* Wiens – Marianas (Guam to Guam)
- *April:* Korenaga – Shatsky Rise (Guam to Honolulu)
- *May:* Lynch-Steiglitz et al.- Line Islands Coring (Honolulu-Honolulu)
- *June:* Carbotte/Trehu – Juan de Fuca – (Astoria to Astoria)
- *July:* Holbrook – Cascadia Margin- (Astoria to Astoria)
- **July 31- Aug. 1-- NSF Ship Inspection – Astoria, OR**
- *August:* Tivey/Butterfield JASON ROV Cruise (Astoria to Astoria)



# Location of 2012 Science Missions



## Imaging the Juan de Fuca Plate



## “OTHER Potential 2013/2014 Work”

### Southern (SoCal Edison) CA 2D/3D Surveys

#### Key Features:

1. Science Plans from SIO ( Driscoll, Kent, et al. was reviewed by NSF and will be 3<sup>rd</sup> party funded if permitted
2. All Data (raw & processed) will be open access and submitted to R2R
3. Projects “approved” by NSF/CU to pursue permits from NMFS and State of California.

### Southern California Seismic Survey Project (SCSSP):

2D MCS off of San Onofre- ~25-30 Days (2013?)

3D MCS off of San Onofre- ~50-55 Days (2014?)



## Possible Atlantic Projects for 2013

### NSF Projects: Projected 185-190 (?) Days of Operations

- **Sawyer - 3D Project – Iberian Margin-Spain**
- **Canales – 2D MCS Project - Mid-Atlantic Ridge - Azores**
- **Hey – MB, Gravity, Magnetics - S. Reykjavik Ridge – Iceland (?)**

### Other Possible Atlantic Projects (2014):

- Canadian Geological Survey – Hudson Bay (~25-35 days)
- USGS Cruises –Extended Continental Shelf (ECS) Mapping Project possible on Atlantic Coast in 2014
- Geoprism and related projects ? New Jersey Margin 3D, etc.



## Vessel: Researchers sail the world studying problems

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Researcher on the R/V Albatross, a research vessel used by Lamont-Doherty Earth Observatory and Columbia University to study the ocean.



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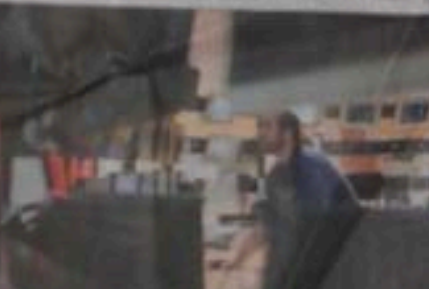
Researcher on the R/V Albatross, a research vessel used by Lamont-Doherty Earth Observatory and Columbia University to study the ocean.



Researcher on the R/V Albatross, a research vessel used by Lamont-Doherty Earth Observatory and Columbia University to study the ocean.

### Reporting on the world's news

The Daily Astorian is a newspaper that provides news and information to the community. It covers local events, national news, and international affairs. The paper is published daily, except on Sundays and public holidays.



Researcher on the R/V Albatross, a research vessel used by Lamont-Doherty Earth Observatory and Columbia University to study the ocean.

The research vessel is used for a variety of scientific studies, including oceanography, marine biology, and climate research. It is equipped with state-of-the-art technology and a crew of experienced scientists and crew members.



### Queen of the Regatta

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# THE DAILY ASTORIAN

19TH YEAR, No. 18 FRIDAY, AUGUST 10, 2012 10PM DOLLAR

## Judge gives DUII win to city

### Norblad says if Marquis wants to prosecute cases, he must appear in Municipal Court

The city of Astoria has won a legal battle with the state of Oregon over the prosecution of DUII cases. The city argued that the state's law, which requires prosecutors to appear in Municipal Court, is unconstitutional. The court ruled in favor of the city, stating that the law is a valid exercise of the state's power.

## Columbia University comes to the Columbia River



The research vessel is used for a variety of scientific studies, including oceanography, marine biology, and climate research. It is equipped with state-of-the-art technology and a crew of experienced scientists and crew members.

## Research vessel makes a pit stop in Astoria

The research vessel is used for a variety of scientific studies, including oceanography, marine biology, and climate research. It is equipped with state-of-the-art technology and a crew of experienced scientists and crew members.

## Johnson 'stunned' by Kitzhaber's gillnet letter

### Governor's intervention surprises him opponents

The governor's intervention in the case has surprised many of his opponents. They argue that the governor is oversteering the course of the law. However, the governor's supporters argue that his intervention is necessary to protect the state's interests.

## Buoy 10 under way amid new safety warnings

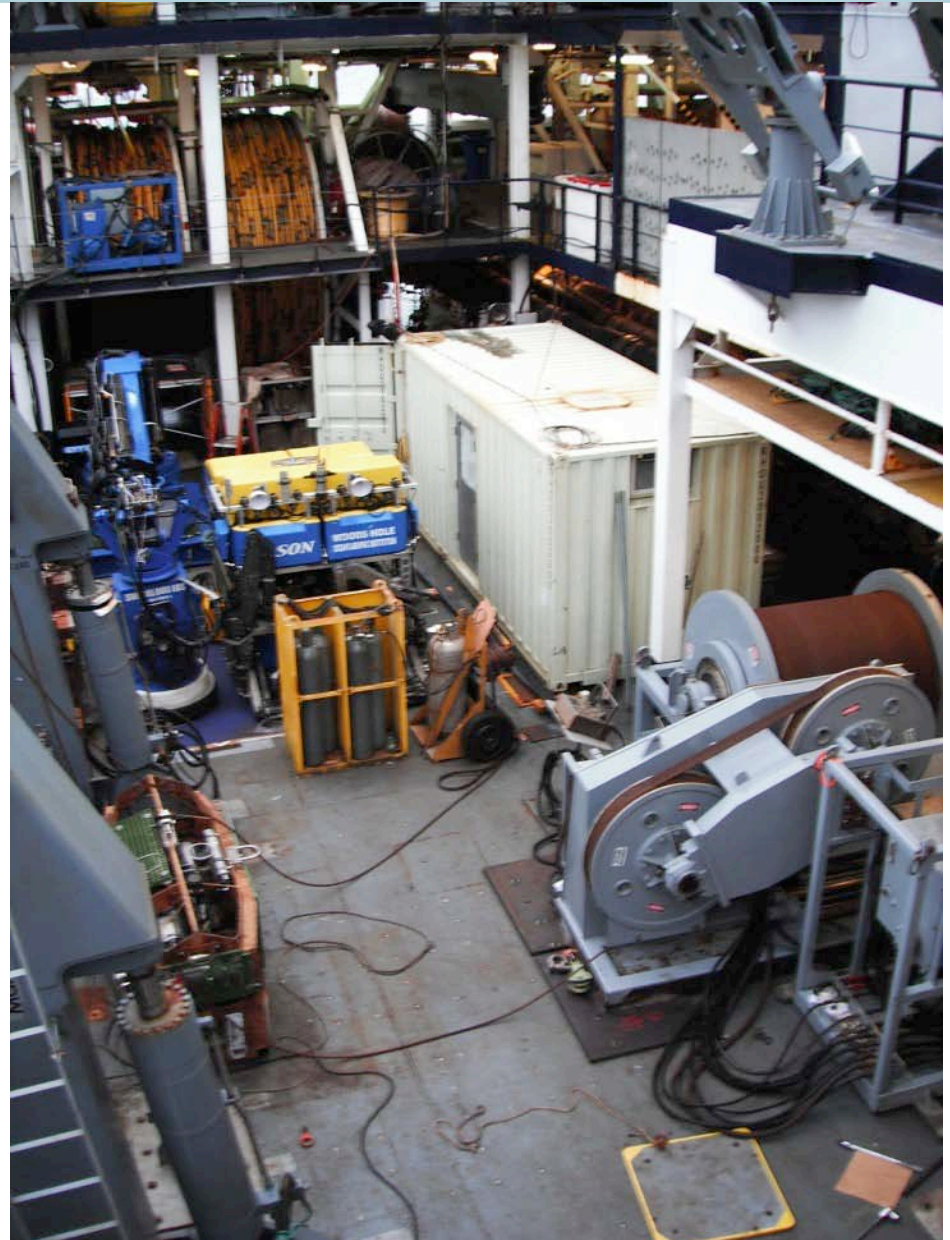
The buoy is being used for a variety of scientific studies, including oceanography, marine biology, and climate research. It is equipped with state-of-the-art technology and a crew of experienced scientists and crew members.



# MGL12-16 – JASON ROV Cruise

On right, photo of Main deck layout of Medea/winch, LARS crane, JASON and HPU, and support van.

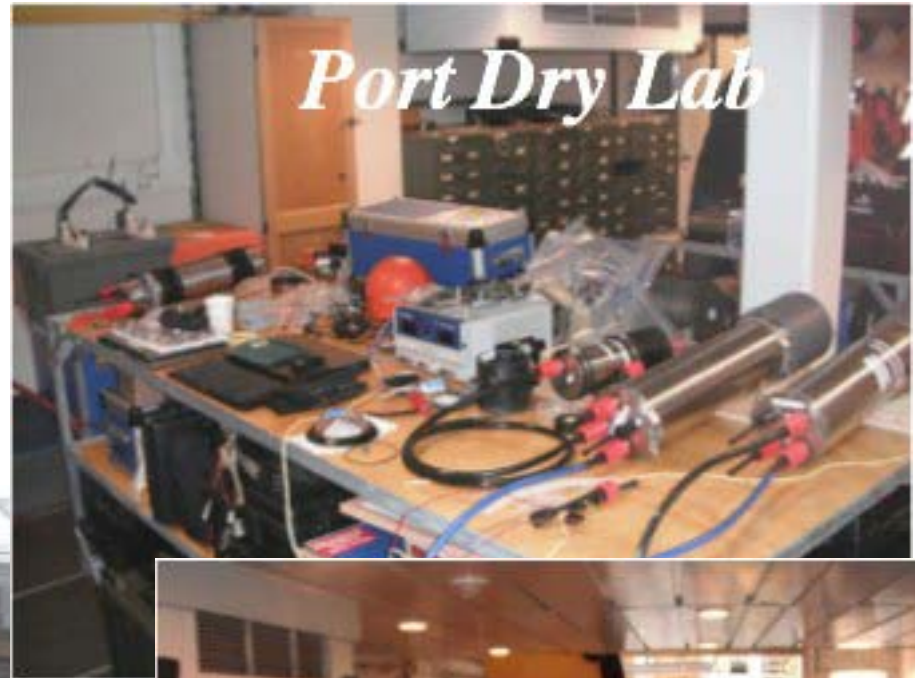
Below, JASON on main deck..





# MGL12-16 – JASON ROV Cruise- LABS

Lamont-Doherty Earth Observatory  
COLUMBIA UNIVERSITY | EARTH INSTITUTE



# MGL12-16 – JASON ROV Support Vans

JASON Control and support vans on OBS deck (below). A total of 5 vans were onboard in addition to JASON/Medea equipment.



OSU LAB van in use during MGL12-16 (above)



# JASON Dive Photos



Below, photo from JASON camera during dive on Axial Seamount site. A total of 4 dives were completed along with other equipment deployments and CTD's.



Above, JASON at CORK Site 857D. Note "Octopus" staffing the site and assisting with maintenance.

# Thanks

OMO would like to acknowledge efforts of the WHOI JASON Team led by Matt Heintz SIO winch pool, OSU lab pool, R/V Thompson staff, and PI's M. Tivey( WHOI) and D. Butterfield (NOAA), and NSF for everyone's support



Above, JASON Science Party in Astoria

On left, deployment of JASON.



# Glosten Winch Plan Implementation

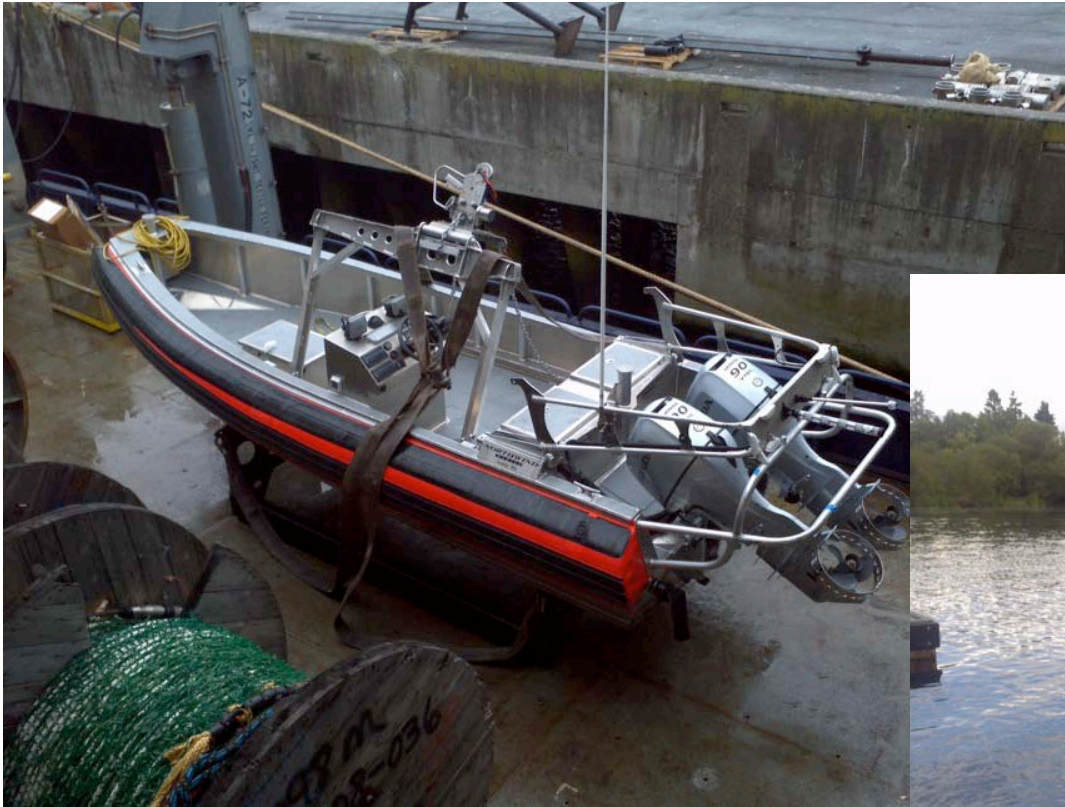
## Update on Glosten Winch Plan:

- Decision made by NSF to re-deploy R/V Wecoma CTD and coring winches and mid-ship's crane to Langseth. Installation begins in early 2013. New winch control house to be installed in new mid-ship location following final equipment layout design in early 2013

On right, photo of Allied mid-ship's crane at OSU Marine Facility



## ***New Science Workboat – August 2012:***



Above, photo of boat loaded on main deck in August 2012

Below, photo of “test run” and acceptance trial on boat in Seattle.





## ***Maintenance Highlights:***

### *Ship Systems:*

- New Oil Water Separator and Scrubbers
- Ariel Compressor repairs and vibration testing
- Deck, engine room fans, and laundry vent repairs
- MG Set evaluation (clean power) and new power management controllers.
- Gearbox cooling pumps and thrust bearing pads
- Hydraulic system repairs

### *Science Systems*

- Additional 30kv of targeted UPS added in lab – additional 30kv to still be added.
- Acoustics upgraded from SIPS to DigiRange
- Streamer Reel 4 gearbox repaired and other reels evaluated
- Computer network upgraded
- Pinger poles constructed and installed

## Update on Long Core Conceptual Design Study:

- NSF funded study as part of 2011 SSSE with Glosten naval architects. Study completed summer 2012 and distributed to UNOLS FIC and MLSOC for review.

Written Reports provided separately to UNOLS FIC in June:

- Summary of Stability Profile evaluation to date.
- DP System Performance Summary for Line Island cruise

## 2013 SSSE Proposal Projects:

### OMO Priority:

1. PA System	\$ 76,000
2. Science Workboat Davit	\$129,644
3. Wireless controls/valves (A-Frame, capstans, reel, cranes)	\$ 92,213
4. Industrial Trash Compactor	\$ 13,485
5. Ship-Shore Power Synchronizing Switch	\$ ??
<b>OMO Subtotal:</b>	<b>\$311,342+</b>

### SSSE 2012 Group Purchase:

<b>Tempus IC Telemedical Device (4 Units)</b>	<b>\$156,800</b>
<b>OMO Total Request:</b>	<b>\$468,142+</b>

## 2013 Ocean Instrumentation Proposal Projects:

### OMO Priority:

1) BARO-16 Vane swap (\$20K) and associated hardware (3)	\$ 64,000
2) 50%-Doors for improving towing Source Arrays (3)	\$ 24,400
3) Data storage and processing upgrades	\$ 72,739
4) Two 32-Channel Slip Rings	\$ 47,090

OMO Total Request: \$208,229