University-National Oceanographic Laboratory System
~UNOLS~

DEep Submergence Science Committee
Student/Early Career Scientist Workshop
December 2, 2012
UNOLS and the Academic Research Fleet

Contents of this Presentation:

• **Part I: UNOLS:**
  – An Overview
  – The UNOLS Fleet
  – National Oceanographic Facilities

• **Part II: The Ship Time Request & Scheduling System**

• **Part III: UNOLS Outreach Initiatives**
UNOLS: Founded in 1971 with 33 ships operated by 17 laboratories

UNOLS today is an organization of 62 U.S. institutions with ocean science programs

- 16 of the UNOLS institutions are facility operators that include:
  - 20 Research vessels,
  - a National Deep Submergence Facility,
  - a National Oceanographic Aircraft Facility, and
  - a National Oceanographic Seismic Facility.

- Facilities are either owned by one of the Federal agencies or by individual institutions.

- Elected Council & 9 major committees (volunteers)

- UNOLS Office
UNOLS is a coordinator or facilitator of community-wide efforts with these goals:

- Promote broad, coordinated access to oceanographic research facilities
- Support continuous improvement of existing facilities
- Plan for and foster support for the oceanographic facilities of the future

UNOLS IS NOT A FUNDING AGENCY
<table>
<thead>
<tr>
<th>SHIP/CLASS</th>
<th>BUILT</th>
<th>Conv/ Mid Life</th>
<th>Owner</th>
<th>LOA m (ft)</th>
<th>Science Berths</th>
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<tr>
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<td>1969</td>
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<td>1970</td>
<td>1989</td>
<td>NAVY</td>
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<td>84 (274)</td>
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<td>57 (186)</td>
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<td>1993</td>
<td>NSF</td>
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<td>1976</td>
<td>1994</td>
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<td>56 (184)</td>
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<td><em>Atlantic Explorer</em></td>
<td>1982</td>
<td>2006</td>
<td>BIOS</td>
<td>51 (168)</td>
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<td><em>New Horizon</em></td>
<td>1978</td>
<td>1996</td>
<td>SIO</td>
<td>52 (170)</td>
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<td><em>Point Sur</em></td>
<td>1981</td>
<td></td>
<td>NSF</td>
<td>41 (135)</td>
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<td><em>Cape Hatteras</em></td>
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<td>2004</td>
<td>NSF</td>
<td>41 (135)</td>
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<td><em>Hugh R. Sharp</em></td>
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<td></td>
<td>UD</td>
<td>44 (146)</td>
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<td><em>Pelican</em></td>
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<td>2003</td>
<td>LUMCON</td>
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<tr>
<td><em>Walton Smith</em></td>
<td>2000</td>
<td></td>
<td>Miami</td>
<td>30 (96)</td>
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<td><em>Savannah</em></td>
<td>2001</td>
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<td>SKID/UG</td>
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<tr>
<td><em>Blue Heron</em></td>
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<td>1999</td>
<td>UMINN</td>
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<td><em>Clifford Barnes</em></td>
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<td>1984</td>
<td>NSF</td>
<td>20 (66)</td>
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Global Class

Marcus G. Langseth
Knorr

Atlantis

Thomas G. Thompson

Ocean Class Vessel: Kilo Moana

Roger Revelle
Melville
New Research Vessels

R/V Sikuliaq:
Sikuliaq is an Inupiaq name meaning "young sea ice" or "young sea ice that is safe to walk on."
- Launch = Oct 13, 2012
- Enter Service = 2014
- NSF funded
- Operator: UAF

http://www.sfos.uaf.edu/arrv/about/


- Regional Class: April 2012 - NSF released a solicitation for Design and Construction of up to 3 new Regional Class ships. Proposals were submitted in September.
Collecting Water and Taking Measurements

Coring

Sediment Trap

Rock Sampling

Mooring Deployment

Towing nets

Collecting Water and Taking Measurements
National Deep Submergence Facility

AUV Sentry

DSRV Alvin (Photo credit: WHOI)

ROV Jason II (Photo credit: WHOI - http://www.divediscover.whoi.edu/tools/jason.html)
Seismic Vessel: R/V Marcus G. Langseth

The starboard paravane about to enter the water. The paravanes permit the streamers and other towed equipment to be widely separated.

UNOLS Ship Requests and Ship Tracks

Figure 34. Geographic Distribution of Ship Time Requests (2000 to 2006)

From: UNOLS Fleet Improvement Plan, 2009 (www.unols.org)
Part II: You have a science idea.

- Preparing a proposal
- Submitting a Ship Time Request
- Cruise Planning - Science and Logistics Planning
Ship Time Request and Scheduling System (STRS)

• Know agency proposal deadlines and begin the planning process early
• Identify all support facilities and technical assistance required to carry out your research program – ship(s), NDSF assets, special tools and equipment, etc.
• Give plenty of extra time for logistical preparations for polar work, foreign clearances, marine mammal and protected area considerations, etc.
Access the UNOLS STRS system portal: https://strs.unols.org/Public/diu_login.aspx

Become a member and Log in ~
Ship and NDSF Vehicle Schedules

<table>
<thead>
<tr>
<th>Year</th>
<th>Ship</th>
<th>Schedule Status</th>
<th>Last Modified</th>
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<tr>
<td>2011</td>
<td>Almirah Explorer</td>
<td>Published</td>
<td>Nov 07, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>Alerta</td>
<td>Published</td>
<td>Nov 23, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>Blue Horizon</td>
<td>Published</td>
<td>Nov 15, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>Cape Nantes</td>
<td>Published</td>
<td>Oct 20, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>Clifford A Barnes</td>
<td>Published</td>
<td>Oct 31, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>Endeavor</td>
<td>Published</td>
<td>Jul 29, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>F. G. Walton Smith</td>
<td>Published</td>
<td>Nov 27, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>Hugh R. Sharp</td>
<td>Published</td>
<td>Nov 17, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>JASON</td>
<td>Published</td>
<td>Nov 22, 2011</td>
</tr>
<tr>
<td>2011</td>
<td>Kie Moana</td>
<td>Published</td>
<td>Aug 06, 2011</td>
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<tr>
<td>2011</td>
<td>Knorr</td>
<td>Published</td>
<td>Aug 18, 2011</td>
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<td>2011</td>
<td>Marcus Langseth</td>
<td>Published</td>
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<td>2011</td>
<td>Melville</td>
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<tr>
<td>2011</td>
<td>New Horizon</td>
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<td>Dec 01, 2011</td>
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<td>2011</td>
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<td>2011</td>
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<td>Nov 30, 2011</td>
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<td>2011</td>
<td>Robert Gordon Spruill</td>
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<tr>
<td>2011</td>
<td>Wacoma</td>
<td>Published</td>
<td>Nov 13, 2011</td>
</tr>
</tbody>
</table>

To view UNOLS Ship Schedules that have not yet been imported into the system, click [here](#).
## 2011 - Roger Revelle

### Preliminary Schedule

**Published:** 10/27/2011

**Liz Benner**

**Scheduling Contact(s):**

shipshed@ucsc.edu  
(858) 534-2841

**Notes:**

- 12/3/10 Changed order of DYNAMO cruises
- 12/15- Changed DP, Multibeam calibration, and transit dates in the month of Feb.
- 3/29- Adjusted WISE dates to accommodate a Vietnam port stop for the Navy.
- 4/27- Updated schedule to take into account generator casualties. Required deferring Vietnam port visit until 2012.

### Associated Cruises

<table>
<thead>
<tr>
<th>Dates</th>
<th>Ports</th>
<th>Area/Navy Op</th>
<th>Lat/Lon</th>
<th>Chief Scientist</th>
<th>At Sea/Total Days</th>
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<tbody>
<tr>
<td>Mbl: 27 Nov 2010</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Dep: 27 Nov 2010</td>
<td>Chi-Lung, Taiwan</td>
<td></td>
<td>0N/90E</td>
<td></td>
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<tr>
<td>Am: 09 Feb 2011</td>
<td>Chi-Lung, Taiwan</td>
<td></td>
<td>0N/90E</td>
<td>Maintenance</td>
<td>0/71</td>
</tr>
<tr>
<td>DeMbl: 09 Feb 2011</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Project:**

**PI/Institution:**

**Project #:**

**Days/Agency/Status:**

**Notes:**

Shipyard period 27 November 2010 - 7 February 2011.
Log in and go to your Principal Investigator Home Page.
How to create an STR – a step by step guide

Question: How do I create a Ship Time Request?

Answer: There are four steps that you will need to follow:

STEP 1: Go to your Principal Investigator home page by clicking on the tab from your user home page or by using the drop down menu from the User Home link at the top of the screen.

STEP 2: Create a "Project" by clicking on "New Project" link on your home page or by duplicating an existing project (click "view" for the project you want and then click on the "Duplicate Project" button and follow the instructions given). The project section describes the proposal, grant, and contract or program information. Click "Save and Finish Working" when done.

STEP 3: Once you click on "Save and Finish Working" you will be sent to the STR Manager page. Here you can create your individual ship (cruise) requests by clicking on the "Create New Request" buttons. You can create additional requests the same way until finished. If you wish to make multiple requests similar to the first you can view your request and use the "Duplicate Request" button. If you created a duplicate project and choose to copy the requests associated with the project, they will appear in the STR Manager page and you can use the "Edit Link" to make changes.

STEP 4: Once you have completed the above two steps you will return to the STR Manager page. If you are ready to publish your request you will need to change the status of your requests from "Draft" to "Submitted". Once this is done, you can click on the "Submit and Publish STR" button and a copy of your request will be emailed to you.

If you have errors in either section of your Ship Time Request you will be notified during the submit operation. Also, if you have not filled in all of the required fields you will be notified during the submit operation. Verify that all required fields have been entered correctly. Be aware that requests that are submitted in "Draft" Status will not be visible to Ship Schedulers.

NOTE: For a successfully submitted Ship Time Request make sure that all required fields (both Orange and Red asterisks) are filled in! If you are not ready to publish your Ship Time Request you can fill in only the Red asterisks.

For more detailed information, read the help document:

How to Create Ship Time Requests and Projects (1.8 MB PDF)
Create a new “Project”

- Funding Agency Info
- Proposal or Project Title
- Start and End Dates
- PIs
- You will need a Project Report for each new Proposal
- There is a duplicate feature

SAVE YOUR WORK
STR Manager Page

This is where you will create a ship time request. A request is needed for every cruise.
The ship time request

- Cruise Dates
- Vessel
- Science Days
- Multi-ship Operations?
- Geographic Area
- Foreign Clearances
- Ports

We try hard to schedule your cruise to your request
The ship time request (continued)

- Other major equipment

- Request your NDSF vehicle – Alvin, Sentry, Jason

- Provide as many details as possible
Submit and Publish

Click the “include Cruise” box.

Once the project/request is published a copy will be sent by email to you, the schedulers, and the agency reps.
Next Steps

• Your project is now in the STRS system
• From the Ship Time Request Overview page – print your NSF STR form to submit with your proposal in Fastlane
Science Investigators and the Fleet

Science Ideas

Science goes to Sea!

Federal Agencies & Other Sponsors $

Proposal
Ship Time Requests

Sched Mtgs
Draft Scheds
UNOLS Scheduling Process
Final Scheds

Operator Ship Proposals

NOAA
Navy
NSF

Peer And Program Review

UNOLS
Cruise science planning

• Develop a Science Team for your Cruise
• Communicate with the Marine Tech and Marine Dept
• Don’t assume the equipment will be there (winches, wire needs, instrumentation, CTD/sensors, navigational needs, vans, etc)
• Provide specifics about any PI supplied equipment and instrumentation
• **UNOLS Shared-Use equipment or Pooled assets** - discuss your plans with person responsible for this equipment ASAP and reserve it as soon as the cruise dates are set
• There are many on-line resources to help logistics planning for your cruise
  [http://shipsked.ucsd.edu/Schedules/Instructions_For_Scientists/](http://shipsked.ucsd.edu/Schedules/Instructions_For_Scientists/)
Take home messages...

• Early and thorough planning is essential!
• Communicate, communicate, communicate!
• Use all resources available to plan your proposal and cruise
• Don’t hesitate to ask questions
<www.unols.org>
The future … Fleet Utilization Trends, ship demand…Early Career Scientist Opportunities
UNOLS Ship Utilization Trends

Ship Days Funded/Pending and Days Available

Operating Days

- Ship Days Funded
- Ship Days Available

Years: 2004 to 2013

Est: Estimated

0 1000 2000 3000 4000 5000 6000 7000


Est | EST
UNOLS Outreach Activities

- Chief Scientist Cruise Training
- DeSSC SVC Opportunity
- UNOLS Speaker Series
- UNOLS On-line resources – Poster, Brochures, Slide packages
- UNOLS Meetings
- Cruise opportunities
UNOLS Chief Scientist Training Cruise program

- Target Participants: Student and Early Career Scientists
- Coordinator and PI: Clare Reimers
- NSF Funded ~ Rapid Award
- UNOLS On-line Application Process
- 2011 Program:
  - Two Wecoma cruise opportunities – July and Sept
  - 14 students on each cruise
  - Cruise Blog
- 2012 Program: November cruise on New Horizon
- 2013 program: East Coast – R/V Endeavor - Announcement coming soon
UNOLS Speaker Series

- Establish a speaker series to highlight UNOLS ships and oceanographic research and to serve as an outreach activity to non-UNOLS colleges and universities
- Particular attention to institutions with under-represented minorities in the marine sciences
- Pilot Program beginning in 2013

Regional Coordinators:

Great Lakes: Doug Ricketts (Univ. of Minn.)
Northwest: Bob Collier (OSU)
Southwest: Bruce Applegate (SIO)
Northeast: Mary Jane Perry (Univ. of Maine)
Southeast: Peter Ortner (RSMAS)
Gulf Coast: Vernon Asper (Univ. of Southern Miss.)
Hawaii: Marcie Grabowski (Univ. of Hawaii)
Alaska: Terry Whitledge (Univ. of Alaska)
Thank you!