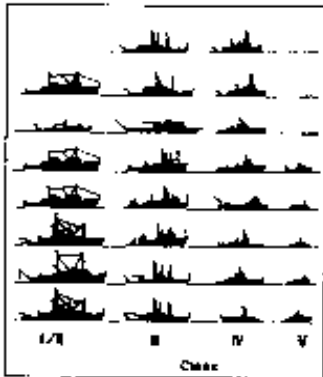


UNOLS News

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Message from the UNOLS Chair...

Early in 2001 UNOLS broadly distributed a draft federal interagency FOFC (Federal Oceanographic Facilities Committee) paper on future fleet renewal titled, *Charting the Future for the National Academic Research Fleet*. UNOLS called for community comment and feedback to the paper via a web-based survey. My introduction to the web survey concluded with:

"Anyone in the ocean science community with an interest in the future of the research fleet is encouraged to read the posted letter and discussion paper and to respond with constructive comments. Please comment by taking our survey located at: http://www.unols.org/fic/fofc_survey.html."

Comments would be most helpful if received by January 31, 2001, and if they contain some indication of (a) the writer's connection to this issue, and (b) whether the writer is representing a group or the writer alone. Note the particular question about "fleet capacity" in Dr. Leinen's letter; comments on that matter are particularly welcome.

Finally, although the FOFC paper is described internally as "the Plan" FOFC has made it clear that the paper is for discussion and comment at this point in time, and is not to be viewed as a settled recipe for fleet renewal. Community feedback is genuinely sought and will be taken into account. Please help UNOLS as the agent of the community to gather and organize that constructive feedback. Thanks for your assistance and thought on this important subject."

While the nominal time window for web feedback on this draft has now passed, the importance of the underlying subject has not. The website will remain open for a time to collect late inputs, even though the UNOLS Council and Fleet Improvement Committee (FIC) will have to get on with the task of studying inputs in hand, replying to FOFC, etc. But the matter of fleet renewal will not be concluded with one draft or one survey. It is an ongoing topic for the future, and there will be other drafts, opportunities for comment, and needs for scientists to participate in a variety of planning efforts. There will be fleet wide census and configuration considerations as well as design issues for individual future ships.

Various UNOLS bodies, especially FIC, will need active new members as terms of current members expire. In all of these efforts the importance of thoughtful input and participation by knowledgeable seagoing members of the UNOLS community cannot be overemphasized. Please stay in contact with the fleet renewal issue in the months and years ahead, and lend a constructive hand when you can.

By Bob Knox, UNOLS Chair



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CALL FOR UNOLS COUNCIL NOMINATIONS

The University-National Oceanographic Laboratory System (UNOLS) academic fleet is facing a most important time in its history. Development of a fleet renewal plan that will address the future demands of the oceanographic community is needed. Additionally, we must continue to strive for the highest quality of service for the ocean sciences from UNOLS, its research facilities, and associated operations. These issues are among several on this year's agenda for the UNOLS Council. Individuals who wish to make a direct contribution to strengthening ocean research in the U.S. via support of the research fleet and oceanographic facilities are needed to fill UNOLS Council seats.

Each year seats rotate open on the UNOLS Council. Nominations are being sought now from UNOLS institutions to fill the positions opening in 2001. Two seats will be filled by election in accordance with the UNOLS Charter at the 2001 UNOLS Annual Meeting in September. The seats include one to be filled by an at-large representative (individuals affiliated with any UNOLS institution) and one from a UNOLS Non-Operator institution. Terms of office are three years for Council Members with the possibility of re-election for a second term. The UNOLS Council consists of nine members, including the Chair and the Vice Chair. In addition, the Chairs of six standing UNOLS committees serve as ex-officio members. The UNOLS Council members represent and act on behalf of the UNOLS membership as the governing body of UNOLS.

Nominations for the slate may be submitted by anyone affiliated with a UNOLS institution in writing to the UNOLS Office (office@unols.org) or the Nominating Committee (Chair, Denis Wiesenburg, denis.wiesenburg@usm.edu; Dennis Hansell, dhansell@rsmas.miami.edu; Curtis Collins, collins@nps.navy.mil). Please submit nominations by May 25, 2001. Not all individuals nominated will advance to the final slate of candidates. The Nominating Committee must give due consideration to the qualifications of the individuals nominated, as well as to maintenance of regional and disciplinary balance on the Council.

2000 UNOLS Election Results

Elections were held at the UNOLS Annual Meeting to fill expiring UNOLS Council terms. The results of the election are as follows:

Robert Knox (SIO) - UNOLS Council Chair, (2-year term) Member At-large

Tim Cowles (OSU) - UNOLS Council Vice-Chair, (2-year term) Member At-large

Wilford Gardner (Texas A&M) - UNOLS Council Member, (3-year term) Member At-large

Curtis Collins (Naval Postgraduate School) - UNOLS Council Member, (3-year term) Non-Operator representative

Thomas Shipley (University of Texas) - UNOLS Council Member, (3-year term) Operator representative

The current membership of the entire UNOLS Council and Committees can be found on the UNOLS website at, <http://www.unols.org/currcommittees.html> >.

UNOLS extends its appreciation to those members of the Council and Committee Chairs who completed their final terms in 2000. These individuals are John Freitag (RVTEC Chair), Paul Ljunggren (RVOC Chair), Barbara Prezelin, Tom Royer, and Jim Swift (AICC Chair).

Scheduling the UNOLS Fleet or how to fit ten pounds of potatoes in a five pound bag?

By Michael Prince, UNOLS Executive Secretary

As we begin the early stages of the scheduling process for Calendar Year 2002 many of you have just finished proposals for the NSF February deadline and have submitted ship time requests that you hope will lead to productive field work in 2002 or later. At the same time, some ship schedules are just now being finalized for 2001. Scheduling the 28 research vessels of the UNOLS fleet to accommodate approximately 250 Principal Investigators (PIs) with over 500 cruises totaling over 4,400 operational days is never easy. However, it may seem that this past year was more trying than ever. Normally, reasonable draft schedules are developed by mid summer and are fairly well finalized by the time of the UNOLS Ship Scheduling Committee Review Meeting in September. This timetable allows PIs to make reasonable plans and gives operators the information they need to submit Ship Operations and Technical Support proposals for the October deadline. There are always a few loose ends and changes that are

taken care of later in the process but not to the extent that this happened for the CY 2001 schedules. This past September, the Schedule Review meeting was devoted to trying to rework the large ship schedules to accommodate as many of the funded ship time requests as possible because many of the factors that affected key decisions were unknown earlier. This effort continued for many weeks after the September meeting and to some extent has not yet been completed. Even with the extensive effort and protracted process it was still not possible to put every project to sea at the time or on the ship requested. Many projects were deferred to next year or had to seek vessels outside the UNOLS system.

For those scientists, program managers and operations personnel that have had to deal with multiple changes in schedules, compromises and postponements this process may seem less than perfect and a common question is: why is this so hard? Why

can't we just feed some basic information about the funded requests for ship time into a computer that is programmed to match projects with the appropriate ships and have it spit out perfect schedules that put everyone on the right ship at the right time and keep the ships at or near optimal utilization? At the moment, our computer is a group of well-intentioned and knowledgeable people known as the Ship Scheduling Committee, consisting of the ship schedulers at the UNOLS operating institutions and their elected chair and vice chair. Working with PIs, program managers and operational personnel they try to balance a very large set of competing priorities and factors to arrive at schedules that meet as many of these needs as they can. The following is a list of some of the major factors that must be considered in scheduling the UNOLS fleet every year. It is by no means intended to be exhaustive.

Scheduling Factors:

- The number of funded requests each year varies by one or more ship years. If demand is high or ships are laid up then flexibility diminishes.
- Fiscal constraints and prudent management of public funds demand that we minimize deadhead transit, use the appropriately sized vessels and do not keep ships idle in port without the opportunity to complete maintenance and overhauls.
- The science being scheduled may have built in constraints and the more restrictive these requirements are the harder the project is to schedule.
- Follow on activities driven by previous cruises such as retrieving moorings, OBS's or other samplers and ongoing time series observations create "must do" cruises that are usually restricted in time.
- Projects that require specialized equipment or specific assets such as the ALVIN, ROV's, OBS's, and others must be scheduled to take into account availability, shipping, handling and preparation time for the equipment and associated personnel.
- Some projects must use specific ships based on either the inherent capabilities of the ship or the installed science equipment suite.
- Foreign clearance requirements or other permit requirements can create very hard advance deadlines for the timing of planned cruises.
- Multi-Ship operations create scheduling complexities that impact several schedules at once.
- Cruises that must follow in a particular order with other cruises narrow scheduling windows.

- Congestion in a particular location such as the Juan De Fuca Ridge or the East Pacific Rise can create scheduling problems due to problems such as interference between acoustic tracking systems, etc.
- Projects that have been deferred in previous years become a priority in subsequent scheduling years leading to more demand and less scheduling flexibility.
- Operational considerations such as weather windows, ship maintenance, mandatory overhauls, inspections, availability of fuel and shore side logistics all affect schedules.
- The professional and personal schedules of PI's and other key cruise participants must be factored into cruise scheduling.
- Funding decisions and Congressional action on agency budgets may have an impact on when a cruise is scheduled and whether or not it can fulfill the original plans. Changing Agency priorities and scheduling priorities can have a similar effect.

In the past year all of the preceding factors had a hand in making the process a difficult one to complete. We were faced with simultaneous requirements for ROV assets in the Western Pacific, Hawaii and the Pacific Northwest and other needs for these same assets in the Indian Ocean and on the EPR. Not all of these requests could be accommodated. There were at least five projects that involved multiple ship operations in the Pacific and several others in the

Atlantic. Many projects had very severe seasonal, weather or ship specific constraints. Projects were spread out around the globe. As a result over a dozen projects with major fieldwork requirements have been deferred until next year, scheduled at less than desirable time slots or not scheduled at all. Two major Navy (LWAD) projects were only provided with half of the research vessel assets they requested. All of this activity and ship use pressure speaks well of the

health of seagoing ocean science, but it undeniably results in the problem of ten pounds in a five pound bag, at least for 2001

In addition to the factors that affect individual projects there are some fundamental, fleet wide factors that directly impact our ability to meet the scheduling needs of all funded research projects and agency requirements. They include:

Fleet Wide Scheduling Factors:

- The relative funding levels for science and facilities support, as well as the overall funding for ocean science research, have direct impact on our ability to meet the needs of every funded research project. Because we are always competing for funding with other areas of science and the national budget, economic factors will drive decisions that will result in compromises and the inability to meet all needs. Funding levels that allow for an excess capacity of facilities such as research vessels, ROV's and other major equipment can create a situation where peak demand can be handled with greater flexibility. This would most likely come at the cost of fewer dollars for research grants. More funding for research grants and less funding for facilities may mean that there are more projects needing to go to sea, but fewer vessels available to support those projects. Facilities such as research vessels are an essential part of the research enterprise and finding the proper funding balance is always a difficult task.
- There is some debate about whether or not the UNOLS fleet should be in the business of supporting work other than "pure" academic ocean science research. There isn't even agreement about what that means or if it is even fair to characterize more applied or operational research needs as something different. In any event, the fact that the UNOLS fleet has been able to support projects for the NAVY and other agencies such as the surveys for the Naval Oceanographic Office (NAVOCEANO) and the LWAD programs has provided a needed service for the Navy, opportunities for collaboration and has more fully utilized a larger fleet of vessels. This in turn maintains a greater number of vessel options for the more traditional research projects. An argument can be made that if the UNOLS fleet did not support the wider range of projects and then reduced its size because it was not fully utilized the net result would be the same or more severe difficulties in scheduling projects when faced with the conflicts listed above.
- The community must be concerned with the types, numbers, sizes and capabilities of research vessel that will be available in the future. The makeup of the fleet of the future will determine how well it can meet the needs of ocean science fieldwork in the future. The Federal Agencies, the UNOLS Fleet Improvement Committee and various individual institutions have begun the process of planning for the renewal of the Academic Research Fleet. All current and future ship users should make their needs known to the people planning and funding this effort. (See the FIC website: <http://www.unols.org/fic/> and the Federal Oceanographic Facilities Committee (FOFC) draft discussion paper on the renewal of the Academic Research Fleet at: <http://www.mlml.calstate.edu/unols/fltdisc/>.)

What about the near future? What about scheduling the UNOLS fleet for CY 2002. What can you do to help the scheduling process and reduce the chances that your program gets the short end?

- Communicate your needs to your program manager, ship scheduler, and the UNOLS Ship Scheduling Committee via a UNOLS ship time request form. This is important even if you are not seeking NSF or Navy funding. If you have questions or need help with the Ship time Request system, contact the UNOLS Office (office@unols.org)
- Edit and update the request whenever the status of your proposal changes or your requirements change.
- Communicate with the primary ship scheduler for your project. The scheduler most likely will initiate communications with you. If you have any special needs or concerns about factors that are vital to the success of your project or if there are any changes in your program, let the scheduler know as soon as possible.

Your patience and understanding when confronted with alternative solutions and "what if" questions will be appreciated. The scheduling process is like a large jigsaw puzzle, except that some pieces are interchangeable and not all pieces are in hand at the outset. Thus trials of alternate arrangements of some pieces are necessary to achieve

the best possible completed picture. When one person requests or absolutely requires a change to a schedule it can easily affect other PI's on the same ship and, many times, PI's on other ships. Our goal is to meet the needs of as many funded research projects as possible. This includes fitting the maximum number of funded projects into the

schedules, but it also involves firming up enough of the schedule early enough that rational project, ship and permit preparations having long lead times can be made. If you have good ideas about how to better accomplish that goal we would be glad to hear from you.

What does ISM mean to me?

By Michael Prince, UNOLS Executive Secretary

Many of you may have heard the term ISM, but how many know what it means to sea going ocean scientists? ISM is the acronym for International Safety Management (ISM) Code which has been adopted by the International Maritime Organization (IMO) and has been made Annex IX of the International Convention for the Safety of Life at Sea (SOLAS). So much for alphabet soup, but does it apply to the ship's we use for science? As of July 1998, it applied to about 78% of ship's sailing on international voyages and in particular passenger vessels. In July of 2002 this code will apply to all vessels on International voyages over 500 tons. The research vessels of the UNOLS fleet are classified as cargo vessels under this code and those over 500 tons will be required to comply in 2002. Under U.S. regulations only our Class I vessels (MELVILLE, KNORR, THOMPSON, REVELLE, ATLANTIS, EWING and the New AGOR-26, KILO MOANA) will be in this category. In the future other

vessels of the UNOLS fleet may become compliant on a voluntary basis.

The objectives of the ISM Code are to ensure safety at sea, prevention of human injury or loss of life, and avoidance of damage to the environment and property. Ship operating companies will be required to establish a Safety Management System that will include a safety and environmental policy as well as instructions and procedures to ensure safe operation of ships and protection of the environment. The operators of the class I UNOLS vessels have already begun the process of establishing these Safety Management Systems so that they will be in compliance with ISM by July 2002. They will be making every effort to make the administrative aspects of this process invisible to scientists while at the same time encouraging full participation by scientists in efforts to ensure safe operation of our research vessels.

The major impact to science will be the need to accomplish better advance planning and coordination with the ship operator. The operators must be informed of any new equipment that will be deployed so that safe procedures can be developed, agreed to and documented before the cruise. Additionally, any time a deck procedure is modified, all aspects must again be thoroughly considered, agreed to by all involved and documented PRIOR to starting the evolution. This aspect of ISM compliance can actually contribute to another UNOLS wide initiative. Continuous quality improvement requires a thorough understanding of the customer's (science party's) needs. Meeting the needs of science and safety management can both be served best by early cruise coordination and careful planning. The goal for ISM implementation in the UNOLS fleet is to improve on an already excellent safety record AND continue to meet the ever-changing needs of ocean science.

COMMITTEE NEWS

Fleet Improvement Committee Activities

By Larry Atkinson, FIC Chair

The Fleet Improvement Committee is currently addressing several major issues in addition to their normal operational issues.

The FOFC draft paper, *Charting the Future for the National Academic Research Fleet* has stimulated considerable interest in the oceanographic community. UNOLS in collaboration with FIC created a web site that contains all the relevant information on the report. Most importantly a survey is included that solicits comments from the community. A strong response of well over 100 surveys has been received. FIC is reviewing the

comments and attempting to organize the responses into logical groups for review by the agencies and other UNOLS users.

Intermediate ships are the most pressing assets requiring assessment by the community. FIC is developing more information related to the intermediates including regional usage patterns and bunk utilization. A report on this assessment will be out in the spring.

As FIC tackles long range fleet planning, the recently published report, *Assessment of Future Science Needs in the Context of the Academic Oceanographic Fleet*, will be

considered. The report summarizes the findings of the OSU summer workshop organized by Tim Cowles. The findings indicate that the demand for ships will not go down. Instead, the way that ships are used in the future will likely change. New tools such as AUVs will extend the reach of the fleet, but will not replace or reduce the fleet.

FIC is also maintaining an oversight role in the design development of the Alaska and Delaware vessels.

FIC Website Updates

The FIC website: <http://www.unols.org/fic/> continues to be updated to include fleet statistics and information on ship designs and capabilities. The site is home to the Biennial Review, the FIC Fleet Planning document, and Science Mission Requirements (SMRs). All available SMRs are now posted on the website. If your institution has developed an SMR document that they would like share with the community, please send it to the UNOLS Office and we will include it on this site.

The FIC Fleet Planning document, <http://www.unols.org/fic/planning/fltplan.pdf>, provides fleet utilization projections as well as utilization statistics for the various classes of UNOLS vessels.

The UNOLS Biennial Review of Sea Going Oceanographic Facilities has been reformatted for easier viewing. The document is intended to be a living document and as such will continue to be updated as additional information becomes available. The intent of the report is to serve as a reference document for information on the fleet, future assets, and projected needs. It divided into six sections. Section 1 explains the intent of the web document and its goal. Section 2 addresses future facility needs and includes links to the Futures Documents and OSU Workshop Paper. Section 3 provides general information on the UNOLS Fleet and includes past trends and future projections. Section 4 addresses facility capabilities, new assets and future needs. There are links to the

HEALY and Polar Class websites, SWATH websites (AGOR 26 and WHOI) and Ocean Observatories sites. Submergence needs are addresses with a link to the DESCEND website. Section 5 is devoted to fisheries research needs/assets and hydrographic survey needs. A link is provided to the NOAA FRV website. Section 6 is devoted to technical issues and provides information on new regulations. If you wish to contribute to the Biennial Review document, please contact the UNOLS Office.

Deep Submergence Science Committee (DESSC) News

By Patricia Fryer, DESSC Chair

The DESSC and the Steering Committee of the DEveloping Submergence SCience for the Next Decade, (DESCEND) Workshop (held in October of 1999) finalized the text for proceedings of the UNOLS supported Workshop and posted these to the UNOLS Web site in their entirety in the fall 2000. The Proceedings are too long, however, to be of immediate use for publicizing the key findings and recommendations of the meeting. As a result, text for an eight-page glossy brochure was put together by the steering committee and DESSC. With expert editorial, drafting, and artistic assistance from WHOI, the brochure titled, *Discovering the Oceans*, was published in December and distributed at the fall 2000 DESSC meeting. The brochure represents the executive summary of the DESCEND workshop. It also incorporates critical parallel efforts that took place subsequent to the

Workshop. The "Key Recommendations" in this brochure represent the future needs of submergence science in the US community, as we face a decade of high expectations and the potential for monumental discoveries in the oceans.

The Brochure is being distributed to members of the scientific communities who use submergence assets and tools. It will also be forwarded to members of congressional staff offices, the Ocean Caucus, funding agencies and others. We are encouraging recipients within the submergence community, to use the brochure as a basis for efforts to help educate the rest of the scientific community, various federal funding agencies, congressional offices, and the new administration in Washington with regard to the vast potential that exists for research in submergence science. As a

community, we need to make these educational efforts ourselves whenever the opportunity arises.

Additional materials and information regarding the Workshop is available at the UNOLS web site <<http://www.unols.org/dessc/descend/descend.htm>> and from the UNOLS office. Additional copies of the DESCEND Brochure can also be requested from the UNOLS Office, <office@unols.org>.

DESSC is here to help you help the community of submergence science researchers and those who support us to achieve the exciting potential outlined in the research priorities of the DESCEND Workshop. A follow-up meeting to pursue the technological developments recommended by the Workshop participants will be organized for the near future.

ALVIN Cam

Watch the ALVIN overhaul in progress!

Go to, <http://www.marine.whoi.edu/ships/alvin/alvin.htm> and click on "ALVIN overhaul live web cam."

Call for DESSC Nomination

A position on the Deep Submergence Science Committee will open this summer. Individuals with a research interest in submergence science and a dedication to the effective use of the submergence assets should apply. A full description of DESSC's responsibilities are included in their terms of reference and can be viewed at, <http://www.unols.org/dessc/terms009.htm>. Candidates are asked to submit their vitae and letters of interest to the UNOLS Office, office@unols.org. DESSC membership terms are three-years, with eligibility for a second term.

Research Vessel Technical Enhancement Committee (RVTEC) News

By Dale Chayes

The 2000 annual Research Vessel Technical Enhancement Committee (RVTEC) meeting was held at the Lamont-Doherty Earth Observatory (LDEO) of Columbia University in Palisades, NY on October 18-20, 2000.

The committee met in an auditorium for the group sessions. Previous RVTEC meetings have been in less formal situations. If you've got an opinion on one or the other, please let us know so that we can fold that into the planning for the 2001 meeting.

By all accounts that I've received, the hands-on breakout session format was a success. There are improvements that we can aspire to so I think we ought to start now to identify topics for next year. Two that come to mind are wireless networking and Lab View.

At the end of our recent meeting Toby Martin, Oregon State University (OSU), inquired about the level of interest in wireless technologies. LDEO is actively using wireless for tail buoy telemetry on EWING's seismic streamer and for TCP/IP networking for a monitoring system on HUDSON RIVER. It is also being used on a remote vehicle under development. I can see a number of shipboard applications that would make sense including: communications between ships in multi-ship experiments; communications around the pier/harbor in home

ports; and ad-hoc networking for one-time experiments and events.

Tony Amos (University of Texas) has done an admirable job of assembling the minutes from the recent RVTEC meeting. We are striving to make them available in a timelier manner.

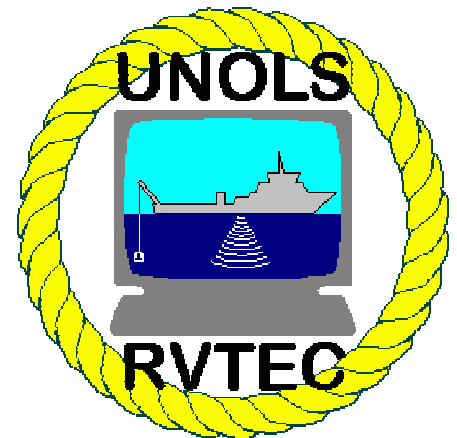
RVTEC has agreed to hold the 2001 meeting at the University of Rhode Island in Narragansett, RI on October 23-25. For the first time, the RVTEC meeting will overlap in time with the RVOC annual meeting. The details of the overlap remain to be worked out but we expect at least one group session and one social event. Some possible topics of discussion and/or presentation during the joint session(s) include ISM and improving quality of service.

At the 1999 RVTEC meeting in Port Aransas, Texas, there was a presentation on Lab View (LV). At the time, you might have noticed that I was having a hard time staying awake. While I wasn't familiar with LV then, it seemed that it was something that one should learn in a hands-on environment and I'm more convinced than ever of that now. While I'm not convinced that LV is a good answer for long term, complex real-time data acquisition systems, it surely has a broad range of uses. LDEO is currently using Lab View to automate impedance test of our sonar system transducers

(EWING's Hydrosweep and sub bottom profilers as well as the SCAMP swath mapper and sub bottom) test procedures, for ad hoc experiments and to run many lab instruments.

Bill Martin (University of Washington) has added a training section to the RVTEC website <<http://kilroy.msrb.sunysb.edu/rvtec/training/index.htm>>. Please contribute information as you come across it.

A multibeam training workshop was organized by Scripps Institution of Oceanography (SIO) and held in San Diego in early January. Several members of the UNOLS/RVTEC community participated including science officers, technicians and operators from Lamont, SIO and the University of Washington among others. All the reports I've heard so far is that although they were long days to sit in lectures, the content was excellent.



Arctic Icebreaker Coordinating Committee (AICC) News

By Lisa Clough, AICC Chair and Jim Swift, Past AICC Chair

The summer AICC meeting was held in Seattle on August 22-23, 2000 in conjunction with the commissioning of USCGC HEALY. While modifications to HEALY continue, commissioning in a way marks the AICC's transition from primarily overseeing the development of HEALY to advising NSF and the Coast Guard regarding arctic science missions on all three Coast Guard icebreakers (HEALY, POLAR STAR, and POLAR SEA).

The 2001 field season is right around the corner, and HEALY will be ready for her first paid-science cruises in the eastern Arctic Ocean. POLAR STAR will be up in the vicinity of St. Lawrence Island for some early season work, and POLAR SEA will be conducting exploratory work in the Chukchi Sea later this summer.

All three ships have modifications underway or planned. For HEALY changes are intended to correct problems and make improvements before the beginning of science operations in summer 2001. Changes include additional berthing, upgrades to lounges and the science conference room, many engineering items, expanded meteorology lab, small boat replacement, and a long list of warranty items. Many of the science changes are the direct result of the science systems testing program that took place during spring and summer 2000. A final shakedown for HEALY is planned for spring 2001, and much of the same UNOLS expertise will be called on to look over the recent corrections and changes. The AICC is helping to prepare a complete synopsis of the testing program from the science perspective. Specifically the AICC

would like to make sure that the applicable lessons learned become part of the information passed on to users in the future.

HEALY's cruise-planning document is on-line at www.unols.org/aicc/. The AICC recommended that there be an online cruise planning document for each of the Coast Guard Icebreakers and that they include links and references to training information and instructions for use of onboard systems online, in the onboard network, and in hard copy. The Coast Guard, AICC and the UNOLS office will work together to ensure that the planning and instructional documentation is accurate and accessible to all users.

The AICC discussed technical support requirements for the science work planned in 2001. The process of providing technical support for Coast Guard science is still a work in progress. The Coast Guard and the funded PIs will need to identify what technical support is needed for each scheduled program, and work with the funding agency to best determine how to provide that support. Clearly the AICC and UNOLS should be called on for insights, and it is anticipated that the UNOLS Office will co-ordinate with the AICC and the Coast Guard to determine what additional technical services and equipment must be obtained for the next field year. One possible mechanism for future technical support would be for recommendations to be circulated to AICC for comment and then sent to NSF. The UNOLS Office could then contact the other UNOLS technical groups which may be interested in providing this support, and a proposal might then be prepared by the UNOLS Office or the identified

technical support group for submission to either OPP or OCE.

There was discussion about the difficulty of planning for operations when funding and scheduling decisions are made so late in the year. To help in this light, the AICC would like to remind the community that long-term user ideas for arctic science are sought, and that all ideas are posted in a pdf file at: <http://www.unols.org/aicc/healyuse.pdf>. The UNOLS Office is now updating this information. Effort will be made to make sure that user ideas emailed to the UNOLS office are sorted by year, area of operation, and status so that it will be useful. Ship time requests will be added to this table as well. A simple method for looking at ship time requests for the Arctic is to use the geographic display of ship time requests at: <http://www.gso.uri.edu/sst/sst.html>.

Additional discussion addressed AICC's role in the scheduling process. Because the AICC members are all potential proposers of programs that might use HEALY, they cannot be involved in the scheduling process. The UNOLS Office will work with the Coast Guard, NSF and other funding agencies to make sure that scheduling concerns are addressed and to serve as an intermediary for specific questions to be put to the AICC. The AICC could be part of the network of advisory contacts for people preparing proposals to use HEALY and POLARs.

In issues related to all three ships, the AICC discussed the possibility that an NSF inspection team might look at HEALY and the POLAR class vessels in the area of oceanographic equipment and

procedures, perhaps under the auspices of the AICC. One recommendation was that AICC members and NSF program managers should accompany such inspections.

The AICC was invited and took the opportunity to view the science spaces on POLAR SEA and POLAR STAR. The tour highlighted the many upgrades for science that have been made and are planned for the future. The "world's most powerful, non nuclear icebreakers" are still excellent platforms for arctic science operations, and will be actively supporting science in 2001. With the additional focus on training, and equipment and systems upgrades that operating the HEALY will bring to

the Coast Guard, it was felt that there would be increased demand to effectively utilize the POLAR SEA and POLAR STAR given adequate funding.

The AICC held an evening icebreaker planning meeting at the AGU 2000 Fall Meeting. This meeting gave potential users of Coast Guard Icebreakers a chance to learn from the AICC and Coast Guard representatives first hand about the testing program, capabilities, and plans for icebreaker support of Arctic science in the future.

In news of the committee itself, AICC members are honored and grateful to have received NSF Arctic Service Awards, which were

presented by Tom Pyle at the August 2000 meeting. Finally, the AICC wishes to thank Jim Swift for his extraordinary work as AICC chair over the last five years. Jim's leadership was truly outstanding, and the culmination of all his hard work can be seen in the HEALY. In recognition of this effort the Commandant of the Coast Guard awarded Jim with the "Distinguished Public Service" award. Capt. Garrett, Commanding Officer of HEALY presented this award to Jim at the recent AICC meeting held on board HEALY in Seattle January 25 & 26. AICC member, Lisa Clough, is the new AICC committee Chair.

Call for AICC Nominations

The AICC anticipates having three vacancies in September 2001. If anyone has suggestions for potential AICC members, or wishes to volunteer please respond to Lisa Clough at cloughl@mail.ecu.edu.

Ship Scheduling Committee Report

By Joe Ustach (SSC Chair)

After multiple attempts and much consternation, the 2001 ships' schedules are as set as they will be. Special thanks go to the West Coast schedulers, UNOLS Office, ROV scheduler, Agency Program Officers, and especially the affected scientists for the hard work and flexibility to fit most of the science into workable schedules. The article by Mike Prince on page 3 details the scheduling challenges faced in 2001. The total number of days requested for 2001 (as of 2/9/01) is 5,945. In 2000, the total number of ship days was 5,053. It should be noted that the calculations in 2001 include data from HEALY while the 2000 calculations did not. The increase in ship time in 2001 is spread among all categories of vessels: In Class I and II, the increase was 365 days; in Class III, 118 days; in Class IV, 264 days; and in the small vessels, 145 days. These increases are also spread among the funding agencies, with NSF showing a 735-day increase in requested time and the

Navy having a 164-day increase. The 'Other' category shows a 7-day decrease from 2000. The percent utilization reflects the increase. Class I and II ships show a potential 99.3% utilization, (with a range of 107.3 – 34.0%) vs. an actual 84.1% utilization (98.7 – 57.7) in 2000. Class III ships show a 69.9% rate (98.5% - 0%) in 2001 vs. 62.8% (68.4 – 41.5); Class IV show 101.2% (148.9 – 83.9) vs. 84.9% (140.6 – 46.1); and the small ships have a 116.4% (193.6 – 67.3) rate vs. 94.4% (176.4 – 67.3) in 2000. The Class III ships reflect the lay up of EDWIN LINK for 2001.

CY 2001 ended the 2-year trial period for the Letter of Intent process of beginning the scheduling scheme. Almost all responses I received from schedulers with regard to the Letter of Intent concept were positive and in favor of it. Therefore, we will adopt it as SOP for the SSC. In fact, there already is one letter of intent submitted for CY 2002.

Research Vessel Operators' Committee News

By Steve Rabalais, RVOC Chair

Oregon State University hosted the RVOC for their 2000 annual meeting. Approximately 60 representatives attended the meeting from U.S. and foreign oceanographic institutions, federal agencies and others interested in UNOLS vessel operations. After welcoming remarks by Fred Jones (OSU Marine Superintendent) and Dr. Tim Cowles (Assistant Dean), updates were given on the activities of the UNOLS Office and UNOLS standing committees.

Federal agency reports included presentations by representatives from the National Science Foundation (NSF), Office of Naval Research (ONR), Naval Oceanographic Office (NAVO), National Oceanographic and Atmospheric Administration (NOAA), U.S. Coast Guard (USCG), and the U.S. Department of State. CDR Daniel O'Clock (NOAA) reported that the first of four NOAA Fisheries Research Vessels (FRV) scheduled for completion in 2003 would be operated out of the Alaska Fisheries Center. Subsequent FRV's will go to the Northeast Fisheries Science Center, Woods Hole, MA in 2004, the Pacific Marine Environmental Laboratory, Newport, OR in 2005, and to the Southeast Fisheries Science Center, Mississippi Laboratory, Pascagoula, MS, in 2006. CDR O'Clock provided information about their programs for improving safety standards on small NOAA research vessels and plans for bringing the fleet of NOAA ships into compliance with ISM standards.

As in the past, the meeting was well attended by marine superintendents from foreign countries, including Italy, UK,

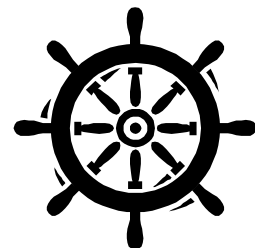
Netherlands, Australia, and Canada. Participation from these groups is always welcome because they bring a new perspective to our operations here in the US. For example, Chris Gobey with SACLANT Undersea Research Center in LaSpezia, Italy outlined their efforts to interface ISM with the science components on their vessels. This was a major undertaking, which included developing Safe Operating Procedures (SOP) for every piece of equipment and operation on the ship, including deployment of scientific equipment permanently assigned to the vessel and transient equipment belonging to visiting investigators. The program also requires that every scientist using SACLANT vessels complete formal safety training courses. Chris reported that the process demanded the patience and understanding of the crew and SACLANT science parties, and he recommended that a significant amount of time and resources be set aside for the completion of this assignment should an operation choose to adopt this approach.

Special reports included an update on new R/V's operating or under construction. Plans were presented for replacement vessels at University of Alaska, Florida Institute of Oceanography, and the University of Delaware, the new sail vessel for Sea Education Association and the new SWATH (AGOR 26) under construction for the University of Hawaii. David Powell, Marine Superintendent, RSMAS provided a brief run down on the successes of their new catamaran, R/V WALTON SMITH. Portable Lab/Container Specifications under development by

Matt Hawkins (U of Delaware), a ship stability program developed by The Glosten Associates, recent developments in the maritime insurance business, and a very entertaining and informative presentation by Giny Gobriscch and Tom McAdam, representing the OSU Sea Grant Extension Service, rounded out the Special Reports Section.

Three topics of special concern to operators were discussed in workshop sessions on the second day of the meeting. The impact of new ISM requirements on the operation of UNOLS vessels, quality of service issues under consideration by UNOLS, and problems and solutions related to crew recruitment and retention were discussed in three concurrent two hour sessions. Reports by each group were provided to the participants and will be available in the minutes to the meeting to be posted on the UNOLS web site.

At the business meeting Steve Rabalais (LUMCON) was elected RVOC Chair and Tim Askew (HBOI) was chosen for Vice Chair. The 2001 meeting will be held in conjunction with RVTEC at the University of Rhode Island. Tentative dates for the meeting are 23-25 October 2001.



PEOPLE IN THE NEWS

National Science Foundation Welcomes Linda Goad

Linda Goad, formally the Marine Superintendent at the University of Michigan, joined the NSF Division of Ocean Sciences, Integrative Programs Section as Program Manager for Oceanographic Facilities on 16 January 2001.

Linda's responsibilities will include ship scheduling and negotiation of ship operation budgets. As part of the ship ops negotiations Linda will be in charge of the insurance certification and accident reporting as required in the Cooperative Agreements. For this year, Dolly Dieter will continue to handle 2001 schedules and budgets for the large ships. Linda will take over all schedules and ship operations budgets for 2002.

Dolly Dieter will also continue to manage the Programs for Deep Submergence Vehicles, Ship Inspections, Construction and Upgrade, Shipboard Scientific Support Equipment and the Wire Pool.

In other NSF personnel changes, Mike Purdy left his position as NSF's Ocean Sciences Director in November to join Lamont-Doherty Earth Observatory as their new Director. Don Heinrichs has returned to NSF to serve as acting Director while a search for Mike Purdy's replacement is conducted.

CORE Welcomes New President

The Consortium for Oceanographic Research & Education (CORE) has appointed VAdm. Conrad C. Lautenbacher Jr., U.S. Navy (Retired), to the position of president of CORE. He assumed his new responsibilities on March 6, 2001. VAdm. Lautenbacher recently retired as deputy chief of naval operations in charge of resource allocation and requirements development for the Navy. In his career with the Navy he also served as commander of the U.S. Third Fleet and director of the Office of Program Appraisal. VAdm. Lautenbacher attended Harvard University, receiving M.S. and Ph. D. degrees in applied mathematics. He was selected as a Navy Federal Executive Fellow and served at the Brookings Institution.

In other CORE personnel changes, Bob Winnokur has left CORE to become CEO of Earth Satellite Services Corporation. His CORE position of Technical Director remains open. Terry Schaff has also left CORE to join the National Science Foundation's Office of Legislative and Public Affairs. The new Director of Government Relations is Scott Rayder.

New On-line: SEANET HEADLINES

Learn about the latest activities of SeaNet by subscribing to their on-line newsletter, SEANET HEADLINES. HEADLINES is a monthly newsletter providing the latest information about SeaNet operations and tips on how to most efficiently use SeaNet. The editor of HEADLINES is Ellen Kappel. You can subscribe to the newsletter by sending a message to seanet-editor@seanet.int. The SEANET HEADLINES Web Site is: <http://www.seanet.int/Headlines>.

New On-Paper

The updated UNOLS brochure, *The Research Fleet*, has been published. Copies have been sent to all UNOLS institutions and additional copies are available by contacting the UNOLS Office, office@unols.org.

The executive summary of the DESCEND Workshop, *Discovering the Oceans*, has been published into an 8-page brochure. The brochure is being widely distributed throughout the submergence community. Copies can be obtained by contacting the UNOLS Office.

Ships in the News

R/V WALTON SMITH Receives UNOLS Vessel Status

At the September UNOLS Council Meeting, the Council voted to make the University of Miami's new research vessel, WALTON SMITH a UNOLS Vessel. The ship underwent an inspection and was determined to be in compliance with UNOLS standards.

Design Study is Funded for ALPHA HELIX Replacement Vessel

The University of Alaska has been funded by the National Science Foundation for design development of an ALPHA HELIX replacement vessel. WHOI is collaborating in this design process, as this may be a model for future intermediate vessels capable of operating in high latitudes, supporting fisheries research and acoustically quiet operations. The vessel length will likely be in the range of 200-210 feet. An endurance of 60 days is planned. Operational areas of the vessel will include the marginal ice edge. The University of Alaska hopes to complete the draft concept design by April 2001.

SAVANNAH Construction Underway

Construction of R/V SAVANNAH, replacement vessel for R/V BLUE FIN, is now underway at the Washburn & Doughty Shipyard of East Booth Bay, Maine. Rodney E. Lay & Assoc. of Jacksonville, Florida designed the ship. Construction is expected to be complete by July 1, 2001. After completion, the ship will be sailed to Skidaway Institute of Oceanography (SkIO) in Savannah where the science labs will then be finished out by SkIO staff. Much equipment and electronics will be transferred from R/V BLUE FIN. They hope to have the ship operational by the fall of 2001. Basic specifications include a length of 91.5 feet, a beam of 27 feet and draft of 8-feet. The gross tonnage is approximately 300. Cruise speed is designed for 12 knots.

CAPE HENLOPEN Replacement Plans

The University of Delaware has received comments from the FIC to the Preliminary Science Mission Requirements (SMR's) for their HENLOPEN replacement vessel and have incorporated these into the final SMR's. Delaware hopes to complete the vessel's concept design by late spring 2001 (April-May).

R/V KILO MOANA (AGOR 26) Construction

Construction of the SWATH AGOR 26 is well underway. The new ship will be commissioned as the R/V KILO MOANA. The ship is being constructed for ONR and will be entering service in 2002 to be operated by the University of Hawaii. Construction began on January 8, 2001 at American Marine Inc. in Florida. Delivery is scheduled for January 26, 2002.

For more information about the ship design and construction schedule, visit their website at: <http://imina.soest.hawaii.edu/agor26/index.htm>

Plans for RV PELICAN Mid-Life Refit are Underway

Louisiana has approved \$1.5 million in state support for a mid-life refit of the RV PELICAN. PELICAN is now 15 years old. Improvements plans for the refit include repair and replacement of worn or deteriorated systems and components including: bilge, ballast, fire, gray water, and sewage piping; hydraulic piping, hydraulic components; blasting and recoating of ballast and sewage holding tanks; new engine controls; and electrical wiring. Design deficiencies will be corrected and the capability of the ship will be increased. Work is expected to begin in late 2001/early 2002 and will last several months.

U.S. Congressman Sam Farr Delivers the 2000 UNOLS Annual Keynote Address

U.S. Congressman Sam Farr, Representing California's 17th District, delivered the UNOLS Annual Meeting Keynote address. California's 17th District includes the Monterey Bay area where several Marine Science institutions are located. Representative Farr is one of the leading members of Congress on issues concerning the oceans. He is a co-chairman of the House Oceans Caucus, a bipartisan focal point for increasing House of Representatives awareness on issues of ocean policy. He coordinated the National Oceans Conference in Monterey in 1998 that was attended by the President and Vice President as well as numerous leaders in government, industry and academia. He has worked for several years toward a new, integrated national ocean policy and has seen that effort come to legislative fruition in the enactment of the Oceans Act of 2000.

Congressman Farr's address to UNOLS focused on the need for the community to join together and form partnerships to strengthen future support of ocean research. He is aware that the UNOLS Fleet is aging and within ten years many of the ships will be requiring replacement. This will require increased funding. There is a lot of competition for funds in an era when, as a nation, we are trying to live within a balanced

budget and as a result, voting on budget issues often becomes political. The UNOLS community needs strong support from the larger constituency of Congress to promote their cause. One way to engage the general public is to emphasize the benefits and the challenge of ocean exploration. Congressman Farr encouraged the marine science community to build partnerships, such as one with the fishing industry. These relationships will help in bringing the benefits of oceanographic research to bear on issues of importance to our society as a whole.

Congressman Farr reflected back on the fulfillment of his dream to have a national conference that would bring the highest levels of government together, including the president, to address the issues facing the oceans. Some of the eventual outcomes of the National Oceans Conference were the Ocean Explorations workshop, the bipartisan Oceans Caucus, and the passing of the Oceans Act. The Oceans Act in turn will establish a high level commission similar to the Stratton Commission that will conduct a three-year study of the future directions and needs of ocean sciences and policy. A commission such as this has the potential to focus the interest of the Congress on the

critical issues facing the oceans. However, these issues will only get fiscal support if there is a large constituency for appropriating money in these areas.

Congressman Farr went on to say that the science community needs to become savvier when it comes to seeking support for marine science. Long-range plans for ocean explorations are moving along, the UNOLS fleet is developing its replacement plans, etc, but these are all competing for the same funds. To sum up, the ocean science community is strong because we are on the national agenda; however, it will be in an even better position if collaborations and partnerships can be formed that will promote a greater understanding of the importance of the oceans to our society.

The science community needs to speak collaboratively and collectively. We need to develop a unified plan and articulate a mission. Education and youth ties will be important elements in generating public support for our field.

In appreciation for taking the time to speak to the UNOLS Membership, Bob Knox presented Congressman Farr with a photo of R/V POINT SUR which, is home ported in his district.



What's New on the UNOLS Website?

The UNOLS Website continues to change...literally every 20 seconds. You may have noticed the rotating ship images in the top left corner of the website window. This is the handiwork of one of our UNOLS webmasters, Sara Anderson. Currently images of 11 UNOLS vessels are included in the rotation. If you would like to add an image of your UNOLS vessel to the rotation, please contact the UNOLS Office. Ship pictures can be sent electronically or mailed as hardcopy photographs. Electronic files should be 300 dpi and saved in jpeg format.

The "What's New" section of the UNOLS homepage provides a listing

of new postings, forms, and links. Recent postings include the:

- Healy Cruise Planning Manual
- The OSU Workshop findings, *Assessment of Future Science Needs in the Context of the Academic Oceanographic Fleet*
- The FOFC discussion paper on Academic Fleet Renewal, *Charting the Future for the National Academic Research Fleet*
- The Small Boat Compendium

A site for "Public Outreach and Education Links" has been established. This site provides links to some of the outreach and educational programs that have been conducted from UNOLS vessels and

other National facilities. Brief descriptions of the programs are included on the site.

Two new forms have been created and posted on the UNOLS webpage. The Mailing list form allows you to add or change your address to the UNOLS database. The intent of the UNOLS Office Feedback Form is to encourage feedback from the community on various services, such as the UNOLS website, meeting announcements and support, travel guidelines and any other items of concern. This feedback is being used to continuously improve the quality of service provided by UNOLS.



Shown in the UNOLS Booth at the 2000 Fall AGU Conference in San Francisco (left to right) is Garry Brass (past UNOLS Chair), Bob Knox (present UNOLS Chair) and Mike Prince (UNOLS Executive Secretary). Photo by Annette DeSilva

**To view UNOLS News on the Web, visit the UNOLS Homepage:
<http://www.unols.org>**

2001 Calendar for UNOLS Meetings

Meeting	Location	Dates
DESSC	Woods Hole, MA	May 30-31, 2001
UNOLS Council	Moss Landing, CA	June 2001
Ship Scheduling Committee	NSF, Arlington, VA	July 19, 2001
AICC	NSF, Arlington, VA	September 10-11, 2001
FIC	NSF, Arlington, VA	September 12, 2001
Ship Scheduling Review	NSF, Arlington, VA	September 12, 2001
UNOLS Council	NSF, Arlington, VA	September 13, 2001
UNOLS Annual	NSF, Arlington, VA	September 14, 2001
RVTEC	Narragansett, RI	October 23-25, 2001
RVOC	Narragansett & Newport, RI	October 23-25, 2001
DESSC	San Francisco, CA (AGU)	December 9, 2001
AICC	San Francisco, CA (AGU)	December 10, 2001

I would like to thank all who contributed information and articles for this issue of the Newsletter. Articles are always welcome and encouraged. Copy can be submitted via mail, FAX or e-mail. The next newsletter is planned for summer2001. Thank you, Annette DeSilva - Editor, UNOLS News

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