UNOLS NEWS

Volume 20, No. 3 **Late Fall/Winter 2003**

Highlights

Message from the Chair…

The arrival of Hurricane Isabel along the mid-Atlantic coast in late September coincided with the UNOLS Annual Meeting in Washington DC, and made it necessary to cancel the meeting on short notice. We apologize to all who were inconvenienced. The UNOLS Council was able, however, to conduct most of its business the day before the hurricane struck, with some Council members attending via teleconference. In this issue we summarize those topics covered by the Council, and bring to your attention some key developments in Fleet Renewal. We will also introduce the newly elected members of UNOLS Council, as well as the new chairs and members of the various UNOLS committees.

Rear Admiral Richard West, President of CORE, was our scheduled Keynote Speaker for the Annual Meeting. Since his role at CORE provides him with a unique perspective on ocean sciences issues in Washington, we thought that the UNOLS membership should not miss his stimulating and thought-provoking views. We are grateful to Admiral West for submitting his "weather-delayed" keynote remarks as an article for this newsletter issue.

While the pace of progress on Fleet Renewal is slower than we in UNOLS would like, there is noticeable progress. Over the next few months there will be more information from NSF about the process (and timing) for construction of the first of the Regional Class vessels listed in the Fleet Renewal Plan. In addition, ONR is funding an analysis of Ocean Class vessel characteristics as outlined in the recent Ocean Class SMRs. Results from this analysis are expected by spring, 2004, and will frame the discussion of the next steps in the Ocean Class acquisition process. The UNOLS Council and the Fleet Improvement Committee (FIC) are following these steps closely, and all progress on these vessel issues will be reported to the UNOLS membership as quickly as possible.

Please do not hesitate to contact me (tjc@coas.oregonstate.edu) if you have any questions about UNOLS issues, or you may contact Mike Prince or Annette DeSilva at the UNOLS Office (office@unols.org).

2003 UNOLS Annual Meeting Cancelled
~ Council Election Results ~

The UNOLS Annual Meeting scheduled for September 19, 2003 at the National Science Foundation was cancelled due to Hurricane Isabel. The 2003 Annual Meeting agenda included a variety of reports from UNOLS and agency representatives. Discussions on important issues facing UNOLS in the upcoming year had been planned. The UNOLS Office has compiled some of these reports and presentations and they can be accessed on the UNOLS website at: <http://www.mlml.calstate.edu/unols/annual/anumt309/anumi309.html>.

Rear Admiral West, President of the Consortium for Oceanographic Research and Education (CORE), was to provide this year's keynote address. Admiral West has graciously provided a message to share with the UNOLS community. His message is contained on page 4 of this newsletter. His full keynote address is posted on the CORE website at: <http://www.coreocean.org/Dev2Go.web?id=207557&rnd=12717>.

The UNOLS Council elections that were to be held during the Annual Meeting were held by mail/fax ballot. Three positions were open for election, each for a three-year term. The following candidates received a majority of the votes cast and are elected to the UNOLS Council in each of the following categories. Dr. Curtis A. Collins (Naval Postgraduate School) was elected to a second term as an Operator Representative. Dr. Cindy Lee Van Dover (Virginia Institute of Marine Science and The College of William and Mary) was elected to a first term as a Non-Operator Representative. Dr. Wilford D. Gardner (Texas A & M University) was elected to his second term in the At-Large position (individual affiliated with any UNOLS Member Institution).

Regretfully, we did not have the opportunity to thank departing Council and Committee members at our Annual Meeting. Chairs from three UNOLS Committees completed terms this fall. They included Larry Atkinson (Fleet Improvement Committee Chair), Steve Rabalais (Research Vessel Operators' Committee Chair), and Joe Ustach (Ship Scheduling Committee Chair). Tim Cowles, UNOLS Chair, presented Larry, Steve and Joe each with a plaque during meetings held earlier in the week. Over the past few years, UNOLS has faced important issues dealing with fleet renewal, quality improvement, and fleet access. The leadership provided by these Committee Chairs has helped to guide us forward, laying a strong foundation for future efforts. We thank them.

Other members departing from the Council and Committees included:

UNOLS Council - Tom Shipley, U. Texas at Austin

Arctic Icebreaker Coordinating Committee:
- Larry Lawver, U. Texas at Austin
- Terry Whitledge, U. Alaska at Fairbanks

Ship Scheduling Committee:
- Daniel Schwartz, (V-Chair), U. Washington

Scientific Committee for Oceanographic Aircraft Research - Carl Friehe (Chair), U. California at Irvine

We thank all of these individuals for their dedicated service to UNOLS.

Over the past year, individuals were appointed to fill open positions on UNOLS Committees. We welcome them aboard and look forward to their involvement in UNOLS activities. New members include:

AICC:	Carin Ashjian, WHOI
FIC:	David Hebert (Chair), URI/GSO
	Clare Reimers, OSU
	Ronald Benner, U. South Carolina
	James Bauer, VIMS
	Newell Garfield, SFSU
	Marc Willis (RVTEC Liaison), OSU
	Al Suchy (RVOC Liaison), WHOI
SSC:	Elizabeth Brenner/Rose Dufour (Co-Chairs), SIO
	Jon Alberts (V-Chair), (WHOI)
SCOAR:	John Bane (Chair), U. of N. Carolina
	Charles Flagg, BNL
	Dan Riemer, U. Miami
	Ken Melville, SIO
	Bob Bluth (ex-officio), NPS
	Haflidi Jonsson (ex-officio), NPS
	John H. Seinfeld (ex-officio), CIT

Finally, UNOLS encourages the community to visit the UNOLS website <www.unols.org>. The latest information about activities and meetings for the upcoming year are posted. Additionally, the UNOLS Goals and Priorities for the coming year will be announced. Your input is valued and as we move forward with implementation of the Fleet Renewal plan we hope that you will assist us by staying engaged in these important activities.

We regret that the Annual Meeting was cancelled, but we will attempt to keep the UNOLS community informed of our issues, activities and future plans. Please do not hesitate to contact the UNOLS Office with questions regarding any of the information provided by this report.

Photo by Kate Sawyers, UNOLS Office

In September, presentations were made to Larry Atkinson, Steve Rabalais and Joe Ustach in appreciation of their service as UNOLS Committee Chairs. Shown from left to right: Joe Ustach (SSC Chair), Tim Cowles (UNOLS Chair), Mike Prince (UNOLS Ex. Secretary), and Steve Rabalais (RVOC Chair). Missing from the picture is Larry Atkinson (FIC Chair), who had to return home before the arrival of Hurricane Isabel.

New UNOLS Cable(s) - Draft Functional Requirements

Community Feedback Requested

Functional requirements for a new electro-mechanical (EM) or electro-optical-mechanical (EOM) cable that might potentially replace or augment the UNOLS .322 CTD cable have been drafted and are available for community review. The purpose of these functional requirements is to define the capabilities and characteristics to be used in designing or evaluating designs for a possible new UNOLS standard smaller diameter electro-mechanical (EM) or electro-optical-mechanical (EOM) cable. This new cable should meet the needs of the oceanographic community for the next two or three decades and provide improved performance relative to the existing UNOLS standard small diameter EM cable (0.322 CTD cable). This cable would not replace the capability of the 0.680 coax or 0.681 EOM cable, which support the requirements for larger packages.

Community input to these functional requirements will help define the parameters for desired capabilities and characteristics that will direct cable designers and manufacturers in developing a cable design to meet your needs. Among the improvements that are driving the need for a new cable are a desire for increased payload and/or safety margin for deep casts using WOCE size CTD packages, a desire for higher bi-directional data telemetry and the continued need for power transmission to instrument packages. Additionally other instrument packages have been introduced into the fleet and are currently being developed that involved continuously towing, either at fixed depths or in an undulating depth mode.

The draft functional requirements document is divided into seven sections: Purpose and General Operating Requirements, Design Priorities, Environmental Factors, Mechanical Requirements, Electrical Requirements, Optical Requirements, and Requirements for synthetic cables. The on-line document allows the reviewer to comment on each separate section. The document is posted on the UNOLS website at: <http://www.unols.org/wire/Cable_Functional_req.html>.

Keynote Remarks from Rear Admiral Richard West, CORE President

I regret that I was not able to join you in September for the Annual UNOLS meeting, but as many of you experienced, Hurricane Isabel closed most of Washington. I appreciate the opportunity to summarize some of the comments I had planned for that morning.

As you probably know, as Oceanographer of the Navy and now as President of CORE, the UNOLS Fleet has been a keen interest of mine for several years. Its continuing vitality is a priority for CORE. Unfortunately, I am not optimistic about the future of the fleet. If something isn't done soon, the UNOLS Fleet will rust into obsolescence. Our community and its federal partners need to do something – now – to build the ships needed to maintain fleet capability.

In the short space I have here, I want to discuss one of the most recent and most promising developments in fleet recapitalization. Please take the opportunity to review the full speech I was prepared to deliver on our website at: <http://www.coreocean.org/Dev2Go.web?id=207557&rnd=12717>. (http://www.coreocean.org.)

Over the last year CORE has worked aggressively to move the ball forward on fleet recapitalization. I often said that I strongly believed that there needed to be a follow-on to the FOFC report. It was quickly growing stale. We needed a document that pledged agency support at specific times and levels to ship recapitalization. We needed something that put the agencies on record as committing to rebuild the fleet. I believe the recent report language in the Senate Veterans Affairs, Housing and Urban Development and Independent Agencies Appropriations Act commissions is just that report.

If you have not had the opportunity to review the recent language I would commend it to your attention. It is an extremely important development in the efforts to recapitalize the fleet. The language will require the NSF in consultation with its agency partners to submit to Congress a report detailing how they plan to manage the procurement and construction of the vessels. The Foundation is instructed to submit the report to Congress within six months of the enactment of the VA/HUD appropriations act. If properly executed, and I expect it will be, this report will move us closer to a federal effort to recapitalize the fleet.

Now that a report is forthcoming, our community needs to be active participants in its formulation. There are a few things that need to come out of this report. First it needs to be submitted to Congress on time. Assuming that the VA/HUD bill is signed some time in November, that places the report on the Hill in May. This puts us in a position where the report and its strategy for implementation can have an impact on the FY05 budget.

Additionally, the report needs to have broad support within the Administration. This means a couple things. It needs to have input from all the other participating agencies, principally Navy/ONR and NOAA, but there also needs to be input from Naval Sea Systems Command, NAVSEA. NAVSEA is the entity within the federal government that has the most experience building ships. Their expertise and credibility is essential.

Additionally, the report needs to have been vetted through OMB. If the folks with the green-eyeshades haven't signed off on it, we're not going to have the support for making the implementation plan a reality. OMB vetting takes time. This means the report needs to be completed post-haste so that it can percolate up through OMB and be transmitted by May. This timetable may be aggressive but I believe it is doable if the agencies involved sit down with UNOLS right now and begin outlining the report.

Finally the report needs to specify funding levels and specific agency commitments. Otherwise the report's just going to be a story about how you'd build some ships, and we will still be without a clear outline of agency support for fleet recapitalization.

I am optimistic about this report. I believe if we focus our efforts and energies on ensuring that the fleet is recapitalized, we will see federal funds committed to the effort in the coming years.

UNOLS COMMITTEE NEWS

Arctic Icebreaker Coordinating Committee News - Fall 2003

By Lisa Clough, AICC Chair

Things have been busy for the AICC. With the current Antarctic ice conditions now requiring two USCG icebreakers to do the break-out and resupply of McMurdo station, refit/ replacement of the two POLAR Class icebreakers, POLAR STAR and POLAR SEA, has become a major focus for the committee. We held a workshop in June in Seattle, covering science changes that might take place if the POLARS undergo a major refit. A workshop report should be available shortly on the UNOLS web page. We have also held informational meetings at the NSF, and have now given two briefs to the Polar Research Board. The USCG has also been aggressively pursuing the refit/replacement issues, and is currently beginning a major study on the topic. Even as the UNOLS newsletter is going to print, both POLAR STAR and POLAR SEA are headed south for the 2004 Deep Freeze mission.

HEALY very successfully supported three different science missions this summer: 1) the Canadian Arctic Throughput Survey (CATS); 2) the Northwind Ridge, Chukchi Plateau, and the Canada Basin bottom mapping program, and 3) the Western Arctic Shelf Basin Interactions (SBI) project. Links for all the projects available on the UNOLS website (www.unols.org).

Currently HEALY is in dry dock in Seattle. While in dry dock, she is having her science seawater system completely redone. The first system worked quite well in open water, but when in the ice, her intakes quickly got clogged. The USCG worked extensively with the Antarctic icebreaker support staff to improve upon the system. With two six-week cruises to support the SBI program in 2004, the new system will get quite a workout in the upcoming summer.

As for the committee itself, we just held our "September" meeting in Seattle in November. The shift allowed HEALY and POLAR SEA's crew to participate. We talked quite a bit about the POLARS, as well as several continuing AICC topics: How to best complete cruises while being sensitive to subsistence hunting on-going in the area, how to facilitate long-term planning for the entire international icebreaker fleet, quick look reports on the 2003 cruises, as well as updates on the underway and computer systems. Have a look at our action items list on the UNOLS web page for a complete update on what we've been up to over the last few months. Our next meeting will be sometime in the spring in DC to facilitate participation of representatives from the funding agencies. The main topic for that meeting will be to go over the debriefs (a series of 20 questions we ask all chief scientists and the USCG to answer after each cruise). At this time we also want to thank retiring AICC members Larry Lawver (on the committee since the beginning- a total of 7 years!) and Terry Whitledge (who put in a full six years of service). Stay tuned for updates on our new members and Chair in the next newsletter.

The AICC can be reached by writing to the Chair (CLOUGHL@MAIL.ECU.EDU) or to the UNOLS Office (office@unols.org).

Research Vessel Technical Enhancement Committee

2003 Annual Meeting Highlights

The United States Coast Guard hosted the RVTEC 2003 Annual Meeting on 18-20 November in Seattle, WA. Captain Dan Oliver, Commanding Officer of HEALY, welcomed the Committee.

Key topics of the meeting included discussions on defining levels of technician/instrumentation support, wireless networking and data transfer, and ship to shore communications. Various issues were addressed including response to the post cruise assessment form, ship inspection programs, pooled support, STCW and ISM compliance, and fleet renewal efforts. Efforts to develop a next generation wire design were discussed. A variety of technical topics were presented including HEALY multibeam upgrade options, the high-resolution marine meteorology workshop, improved ADCP quality, performance of globally corrected-GPS, Ridge 2000 metadata forms, and Arctic CTD operations. Future INMARTECH meeting plans were discussed. The meeting included a factory tour of Sea-Bird Electronics, as well as a tour of the US Coast Guard Icebreaker HEALY at Todd Shipyard.

The meeting concluded with RVTEC business items. Steve Poulos was re-elected to another term as RVTEC Vice-Chair.

Fleet Improvement Committee News

By David Hebert, FIC Chair

The Fleet Improvement Committee (FIC) met at the National Science Foundation on September 17, 2003. Minutes of the meeting and reports are available on the UNOLS Web site <http://www.mlml.calstate.edu/unols/fic/ficmt309/ficmi309.html>. There have been a lot of changes in the membership of FIC this fall. At this meeting, two new FIC members, Jim Bauer of Virginia Institute of Marine Science and Ron Benner of University of South Carolina were introduced. Toby Garfield (San Francisco State University) then joined FIC in October. Joe Coburn, who represented the Research Vessels Operators' Committee, retired from WHOI this fall. Joe's job was to keep us scientists in the world of reality as we discussed ships. He is being replaced by Al Suchy who also replaced Joe at WHOI as the Marine Superintendent. Additionally, Marc Willis (OSU) joined FIC as representative of the Research Vessel Technical Enhancement Committee. Finally, Larry Atkinson completed his second term as Chair of FIC and nearly a decade of FIC service. Larry did a fantastic job in publicizing the efforts for the need to renew the Academic Fleet and leading efforts for defining the Science Mission Requirements (SMRs) for the planned future research vessels. Before rushing home to defend his house against Hurricane Isabel, Larry's last act was to make as many 'action points' for FIC as possible.

FIC continues to review and provide feedback on the design and construction efforts of the CAPE HENLOPEN replacement vessel, the Alaska Region Regional Vessel and the EWING replacement. Bids have been received from several shipyards for the CAPE HENLOPEN replacement vessel and a decision of which yard will get the contract is expected soon. The National Science Board approved a resolution that included a funding request for the Alaska Region Research Vessel as part of the NSF Major Research Equipment and Facilities Construction account in a FY2005 or future budget request. The ARRV committee is continuing with design efforts and sharing their design decisions with FIC - see <http://www.mlml.calstate.edu/unols/fic/arrv/arrv.html> for the details. Finally, Lamont-Doherty Earth Observatory (LDEO) presented their ideas for replacing the EWING with a more capable commercial 3D seismic vessel and modifying this vessel to have a more general marine geophysical and oceanographic capability. Draft SMRs for this ship, available from the main UNOLS Web page, are posted for feedback by the oceanographic community. Please provide your input to this important document. FIC has sent a letter to NSF strongly endorsing LDEO's plan for the replacement of the EWING.

FIC had asked the Office of Naval Research (ONR) to fund a motion study comparison of the KILO MOANA, University of Hawaii's new SWATH vessel, and a monohull ship. John Freitag (ONR) has funded Curt Collins of the Naval Postgraduate School to undertake such a study. The initial part consists of studying two similar sized vessels operating out of the same homeport undertaking reasonably similar, although not identical, mission profiles. The POINT SUR and WESTERN FLYER both operate in the Monterey Bay area. POINT SUR is 135 feet in length and displaces 640 Tons. WESTERN FLYER is 117 feet and 419 Tons displacement. Sea state will be obtained from Wave Rider buoys in Monterey Bay. Additionally, ONR has given the University of Hawaii the go ahead to undertake the deployment of similar instrumentation for KILO MOANA. The results of these studies will begin to quantify the motion of the vessels under different sea states.

The National Science Foundation is examining design and acquisition strategies for the Regional Class vessels. Based on the results of a study by the naval architectural firm, JJMA Inc., Jim Yoder (NSF) presented a possible scenario (see meeting report for details) for the design and acquisition of Regional Class ships given a cost cap of approximately $25M. In a letter to Jim Yoder, FIC has raised its concerns about ensuring that there is broad community input to the design and acquisition process. Although the recent SMRs represent broad community agreement on a range of desired capabilities, we anticipate that design constraints will emerge during the next steps in the process. While the JJMA study showed that the Regional Ships could meet the upper range of all the SMRs, the participants of the Regional Class SMR Workshop and the community did not prioritize the SMRs because there is still some difference of opinion about whether to place more weight on one requirement or another and these decisions will have long term impacts on the overall operating costs and capabilities of the fleet. Community input will be essential as these trade-offs are evaluated. Thus, in our letter, we asked to see a more detailed design and acquisition plan explaining how community input will occur during the design process before NSF proceeds with a Request for Proposals.

In addition to examining how to improve the fleet through the renewal process outlined in the FOFC report, FIC plans to examine how to improve the present fleet. FIC has suggested that the UNOLS Post Cruise Assessment Subcommittee provide feedback to FIC with respect to shipboard capabilities and equipment improvements. FIC will continue to conduct its debriefs of KILO MOANA cruises in order to understand how to conduct oceanographic research from a SWATH vessel and to identify advantages/disadvantages to working on this type of vessel compared to a monohull.

Lastly, thanks to Larry for making sure that FIC has a full plate for the upcoming year.

Research Vessel Operators' Committee Update

By: Tim Askew, RVOC Chair

The University of Minnesota's Large Lakes Observatory, located in Duluth on beautiful Lake Superior, hosted the 2003 RVOC meeting on 8-10 October. Everyone brought his or her earmuffs and snowshoes, however as luck would have it, "Indian Summer" set in for the week. A big thanks to Mike King, Marine Superintendent; Jim Riehl, Dean; and Dr. Tom Johnson, Director for hosting this meeting.

Committee reports included a presentation by Safety Committee Chair Tom Althouse. Tom welcomed new member Bill Martin (UW) to the Committee as the RVTEC representative. Topics of discussion were the new Research Vessel Safety Standards (RVSS) Status, the RVOC Safety Training Manual, which will need to be updated to include SOLAS, ISM and other new regulations. Additionally, Shipboard Security; Port Security; Van Security; and Safety were discussed. The issue of liability and safety concerning the chartering of non-UNOLS vessels was also discussed. Lastly, the issue of "wet weight handling gear design requirements" (CFR 189.35.9) needs to be addressed in depth to provide consistency on handling gear requirements such as cable, winches, blocks, weak links, and shackles that are not currently matched uniformly throughout the fleet. The Ship Scheduling Committee's outgoing Chair, Joe Ustach (Duke/East coast) and outgoing Vice Chair Dan Schwartz (UW/West coast) announced that Liz Brenner and Rose Dufour (SIO/West coast) will Co-Chair and Jon Alberts (WHOI/East coast) will be Vice-Chair. Jean Captain (LLO, UM-D) presented a brief overview of current RVTEC issues including ship-to-ship wireless networking, dissolved 02 sensors being affected by cold weather, new Seabird sensors and depth limitations on Tri-axis. Dan Schwartz who replaced Joe Coburn as the RVOC Representative to AICC gave the AICC Report. He discussed the Polar Fleet and the fact that the vessels are aging and will need to be replaced. Matt Hawkins (UDEL) presented the Van Standards and Inventory Committee report. He stated that the database for the inventory is being completed by Doug White at UDEL. Matt is the East coast Van Pool Contact and Fred Jones (OSU) is the West coast contact.

A total of nine Research Vessel updates were presented. Stan Winslow (UH) discussed the KILO MOANA's first full year of operation, which included five months of operation in the Bering Sea and Gulf of Alaska. Joe Ustach (Duke) reported on the CAPE HATTERAS mid-life refit. He stated that most of the modifications and renovation items had been completed and after operations are complete this year they will finish. The PELICAN mid-life refit took seven months and $2.4 million to complete according to Steve Rabalais (LUMCON). Steve indicated that with the 10-foot stern extension (105' - 115') the deck load increased from 15 to 25 tons and provided 280 square feet of additional deck space which has allowed a re-arrangement of deck equipment, including a new crane and winch. Tom Smith (UAK) discussed the status of the ALPHA HELIX replacement. Tom stated that the conceptual design for ARRV was completed in 2001 with model testing in 2002 and anticipated completion in 2007, assuming funding is available. The CAPE HENELOPEN replacement is on track according to Matt Hawkins (UDEL). Construction should begin by mid-2004 with completion in 2005. The shipyard selection is currently being undertaken. Dutch Wegman (WHOI) discussed progress on the ASTERIAS replacement with their newly designed coastal R/V being 60 feet long with a 350-mile range and a 20-knot cruising speed. He stated that the vessel would be built to sub chapter "T" specifications. Paul Ljunggren (LDEO) discussed the EWING replacement vs. upgrading. Paul stated that in order to provide 3D seismic operations of up to 12 KM, maintain enough deck space for vans, etc. vs. the present 2D and occasional 3D ops, they are considering a replacement vessel instead of a mid-life on the present vessel. Jim Meehan (NMFS) discussed the new fisheries vessel progress. The first FSV, OSCAR DYSON, was christened in October 2003 and is scheduled to be fully operational by 2005. The first of four planned, she is 208 feet long and is being constructed by VT Halter Marine, Moss Point, Mississippi. Lastly, Randy Maxson (FIO) reported that the SUN COASTER replacement was on hold for State funding; however, the conceptual design has the vessel at 140 feet versus the original 120 feet.

Vessel Operators from foreign institutions included Geraint West, National Environment Research Council (NERC) at Southampton Oceanography Centre, UK; Ian Sage, the NATO SACLANT Undersea Research Centre, La Spezia, Italy; and Marieke Rietveld, Royal Netherlands Institute for Sea Research (NIOZ). They each discussed their Institution's past year operations and future plans. Additionally, Marieke indicated that at least five new ship builds are planned for European countries.

Invited speakers provided insight on several important topics. Dr. Thomas Dobie from the National Biodynamics Lab, College of Engineering, University of New Orleans presented an enlighting talk on "Critical Significance of Human Factors in Ship Design". LCDR John Herring discussed implementing the new security rules at NOAA. Mark Witsaman, Vice-President of Technology and Development at SeaWave Digital, provided an overview of low cost voice and data

communication with users able to have individual accounts. Mr. Jim Shelley, Director of Security Programs for Mitags/PMI gave an overview of National and International Security Regulations and Mr. Gregg Trunnell, West coast Director of Mitags/PMI discussed "Maritime Training Challenges". (See RVOC minutes 2003 appendices for details on their presentations.)

The final day of the meeting was devoted to RVOC business matters. Matt Hawkins (UDEL) was elected to a three-year term as Vice-Chair/Chair Elect. Tim Askew (HBOI) assumed the duties of Chair for the next three years and Steve Rabalais (LUMCON) stepped down after serving a total of seven years (four as Vice-Chair and three as Chair). Steve helped bring RVOC through the post 9/11 myriad of new regulations and changes that affect all of the operators irrespective of vessel size. A vote of thanks goes out to Steve for his tireless efforts on behalf of RVOC. Other business items included discussions on voluntary ISM compliance, continued membership in the Ship Operators Cooperative Program (SOCP), Post Cruise Assessment's (PCAs), chartering of non-UNOLS vessels, vessel inspections, Safety Training Manual and Safety video updates. Next year's meeting will be hosted by Lee Black at the Bermuda Biological Station for Research in St. Georges, Bermuda.

SCOAR Meets For Second Time

By John Bane, SCOAR Chair

The newly formed Scientific Committee for Oceanographic Aircraft Research met for the second time on October 14 and 15 at the offices of Ocean.US in Arlington. John Bane, professor in the Marine Sciences Program at the University of North Carolina-Chapel Hill, was installed as the Committee Chair following the move of Carl Friehe (UC-Irvine), original SCOAR Chair, to ONR's Marine Meteorology Program.

The meeting was held at Ocean.US because of the committee's interest in learning how research aircraft can best fit into the emerging efforts in ocean observing systems. Presentations were made to the committee by Eric Lindstrom and Larry Atkinson of Ocean.US and by Scott Glenn from Rutgers University. During subsequent committee discussion, it was determined that aircraft will be useful in at least three areas in ocean observing systems: Routine observations in areas that do not have fixed *in situ* instrumentation (*e.g.*, to gather initialization/verification data for circulation models), observations surrounding fixed instruments sites, and intense observations for specific, short-term events such as an algal bloom, a high runoff episode, an atmospheric storm, a Gulf Stream intrusion or an ocean eddy event. It was noted that long-range aircraft that are operated by agencies such as NOAA, NCAR and NASA would be needed for deep-ocean observatories. In order to best serve the growing coastal observing systems around the country, SCOAR members foresee the need for four regional centers that would operate shorter-range aircraft. The Naval Postgraduate School's CIRPAS is a good candidate to be the West Coast center. New centers on the East Coast, in Alaska, and on the Gulf of Mexico coast are envisioned. Finally, it was decided that a SCOAR member should attend the CoOP Pioneer Workshop (November) and NSF ORION Workshop (January) to bring aircraft information to these discussions on ocean observatories.

A presentation was made to SCOAR by Cheryl Yuhas, from NASA, who described the possibility that several NASA research aircraft, including the P-3B, the DC-8, and the two ER-2's, may be decommissioned. Alternative possibilities include the transfer of one or more of these aircraft to another agency. Carl Friehe spoke briefly about recent ONR activities relevant to aircraft research.

Other topics at the meeting included a discussion of CIRPAS and how it can become most effective as a UNOLS facility. A tentative "standard aircraft oceanographic instrumentation list" was constructed, and various ways that CIRPAS aircraft capabilities could be advertised were considered. It is very important to get into place an understandable application procedure for the use of these aircraft. These procedures could then potentially be adopted by other aircraft facilities that receive the UNOLS National Facility designation in the future.

Ship Scheduling Committee Report

By Rose Dufour (SSC Co-Chair) with input from Liz Brenner (SSC Co-Chair) and Jon Alberts (Vice Chair)

The fall scheduling meeting was overshadowed by the approaching storm, Hurricane Isabel, an ominous sign of the difficulties facing the 2004 scheduling. Despite the weather, the task at hand was to satisfy the various components of complicated scheduling, while keeping within Federal Agency budgets. The issues were exacerbated by a list of deferred 2003 programs that had high priority in 2004. Many of these programs had strict weather window considerations, required scheduling around asset availability, and compulsory IHA permits and foreign clearances, both of which dictated long lead times.

In preparation for the September meeting, schedulers had taken the July meeting recommendations and provided scheduling options for discussion. Prior to the September meeting, at least four web/telephone tele-conferences were made in order to help wring out all the possibilities (using the new web-based PIXION PictureTalk system, chosen after testing driving various products). Mike Prince and Linda Goad's enormous scheduling spreadsheets proved to be a tremendous tool to schedulers as they struggled to keep track of the various constraints and funding decisions. At numerous times during the fall scheduling meeting, phone calls were made to key individuals to help sort out the priorities and availability of equipment if certain scenarios prevailed. The schedules for the intermediate and large ships do not stand alone, and like a house of cards, the re-arrangement of one schedule can "cascade" down to the need to re-do various ship schedules. In addition, positioning the ships to handle early 2005 needs was especially important since the austral summer (January of 2005) will require large ships off of South Africa and the Southern Oceans.

The small ships didn't avoid the effects of the large and intermediate ship tribulations. Many programs will be squeezed onto the smaller vessels in 2004 in order to satisfy the need to complete time-dependent projects. The level of effort needed to accomplish the same number of ship days is greater on the smaller ships because of the amount of turn-arounds required, and with an average of 176 days on the Regional Class vessels, they will certainly have their work cut for them in 2004! The large ship schedules were on the hefty side as well, with the average number of funded days at 323. The Intermediate Class vessel average is 221 days, while Local Class vessel's average is 136 days. However, in the end about 218 days could not be accommodated in 2004 and thus becomes our starting point for 2005 scheduling.

During the meeting, and actually through-out the whole process, Mike Prince made a Herculean effort to keep the momentum going, and the various scenarios in check, and we thank him for job well done. The last order of business for the ship schedulers was to give Joe Ustach and Dan Schwartz heartfelt thanks for a tremendous job as Chair and Vice-Chair of this committee. The elections were held and the positions were filled with appointment of Rose Dufour and Liz Brenner as Co-Chairs of the Ship Scheduling Committee, and the appointment of Jon Alberts as Vice-Chair.

DEep Submergence Science Committee News

By Patricia Fryer, DESSC Chair

Opportunities to interact with submergence facility users and representatives are planned for this winter. The next regularly scheduled DESSC meeting will be just before the Portland AGU meeting, on Sunday - January 25, 2004 (location to be announced). The meeting will take place from 8:00 a.m. to 5:00 p.m. The tentative agenda for the meeting is available at <http://www.unols.org/dessc/desmt401/desag401.html>. There will be a special afternoon workshop to give attendees a training session in the use of a preparation for use of the National Deep Submergence Facility (NDSF) vehicles. This training session is the first of its kind and will be offered to provide detailed information on both the capabilities of the NDSF vehicles (primarily ALVIN, Jason2 ROV, and the DSL-120A sidescan sonar system), sensor suites, and their at-sea operations procedures.

For those who attended the Fall AGU meeting in San Francisco, there was a special poster session on December 10, 2003 entitled "Recent Advances in Understanding Submarine Environments and the Future of Submergence Research and Facilities." Patty Fryer and Dan Fornari convened the session. It highlighted recent developments in submergence science. The poster presentations during the session reviewed use of occupied submersibles and remotely operated vehicles as mechanisms by which marine geologists, biologists, and geochemists can perform field work in extreme environments, collect samples, run experiments, and establish observatories on the seafloor and in the water column. This session highlighted recent advances in marine studies as pertains to systems investigated with submergence assets including ridge crest studies, convergent and passive margin studies, and research in the water column. Presentations on upgrades to existing vehicles and projected uses for the future provided attendees with up-to date information on the state of the art in submergence vehicles and systems.

Meeting Announcement

The UNOLS
DEEP SUBMERGENCE SCIENCE COMMITTEE

Will hold their
Winter Meeting on

Sunday, January 25, 2004
Portland, Oregon
8:00 a.m. to 5:00 p.m.

The DEep Submergence Science Committee (DESSC) invites you to attend their winter meeting on Sunday, January 25, 2004, the day before the start of the AGU Ocean Sciences Meeting (26-30 January). This year the traditional DESSC meeting held in conjunction with the Fall AGU Meeting in San Francisco has been scheduled to coincide with the Winter AGU Ocean Sciences Meeting in Portland, Oregon. The DESSC meeting is scheduled to return to San Francisco in December 2004.

All science users of deep submergence facilities are encouraged to attend the meeting. The agenda will include presentations by the National Deep Submergence Facility (NDSF) operator, funding agency representatives, as well as Principle Investigators who used submergence vehicles in 2003. Facility operation summaries and schedules will be presented. DESSC activities, future plans and issues will be reported. This will include discussion of long-range and expeditionary planning, public outreach and educational activities.

The meeting will also include a training session on National Deep Submergence Facility vehicles' science capabilities and operations. This training session is the first of its kind and will be offered to provide detailed information on both the capabilities of the NDSF vehicles (primarily ALVIN, Jason2 ROV, and the DSL-120A sidescan sonar) and sensor suites, and their at-sea operations procedures. The session will also provide insightful information on the effective operating procedures for these systems. The material that will be presented should be informative to both new users of the facility vehicles, as well as those individuals who have had the opportunity to use the systems in recent years. The latest upgrades to the facilities will be presented as well as planned improvements. Information will also be provided on autonomous vehicle operations and how ABE has been used effectively with the NDSF vehicle systems in recent surveys.

The tentative agenda for the meeting, room location, and on-line registration form is posted on the UNOLS website at <www.unols.org/dessc/desmt401/desag401.html>. All meeting participants are requested to register in advance. There are no fees associated with attending. We hope that you will be able to join us at the DESSC Meeting in January 2004.

Draft Report on Ocean Observatory Facilities Needs ~Available for Community Review~

The UNOLS Council formed a Working Group on Ocean Observatory Facility Needs in February 2003 to assess compatibility of current and planned UNOLS assets with requirements generated by the Ocean Observing Initiative (OOI) and related programs. The Working Group's draft report is now available on the UNOLS website for community review and comment. The findings and recommendations contained in the report are based on detailed consideration of ocean observatory related issues. The report can be viewed and downloaded at http://www.unols.org/fic/observatory/work_group.html.

Community feedback is requested. Comments can be provided on-line using the link above, or they can be sent by e-mail to the UNOLS Office at office@unols.org. A response by January 22, 2004 is appreciated.

National Academies' Report on Future Needs in Deep Submergence Science

From excerpts of the NAS Press Release on November 12, 2003. The full press release can be viewed at: <http://www4.nationalacademies.org/news.nsf/isbn/0309091144?OpenDocument>.

A new report from the National Academies' National Research Council says new submersibles -- both manned and unmanned -- that are more capable than those in the current fleet are needed and would be of great value to the advancement of ocean research.

The National Science Foundation's Division of Ocean Science, asked the Research Council to study the issue because of NSF's concerns about the current fleet's usefulness. NSF, NOAA, and the U.S. Navy sponsored the new report.

Over the years, manned and unmanned deep-sea vehicles have improved our understanding of the processes that govern plate tectonics and ocean chemistry, and of the origins and evolution of life. But despite significant improvements in the design and operation of manned, remotely operated, and autonomous underwater vehicles, much of the ocean and seafloor remains beyond the reach of U.S. scientists. And, the report notes, human observation is still often the best way to study some aspects of the ocean and seafloor.

The report calls for a new and more capable manned vehicle that should provide the scientists onboard with improved visibility and achieve neutral buoyancy at various depths. A detailed engineering study also is needed to assess the costs and technical risks of extending the diving range of an upgraded manned vehicle to 6,500 meters.

To give researchers greater ability to cover a wider geographic range in their deep-sea studies, NSF should -- after a careful cost-benefit analysis -- consider locating the new remotely operated vehicle at a site other than Woods Hole. Furthermore, NSF should provide additional operating funds to allow researchers from the National Deep Submergence Facility to use submersibles from other facilities when those from the Woods Hole fleet are inadequate or unavailable.

A new manned submersible could be built by 2006, the report says, but given the high demand for deep-diving research vehicles and for submersibles that can go deeper than 1,500 meters, a new, more capable unmanned submersible should be built by 2004 or 2005.

Copies of Future Needs in Deep Submergence Science: Occupied and Unoccupied Vehicles in Basic Ocean Research will be available in early 2004 from the National Academies Press; tel. 202-334-3313 or 1-800-624-6242 or on the Internet at http://www.nap.edu.

Bermuda Biological Research Station's Oceanographic Time-Series Celebrates its 1,000th Research Cruise

In November 2003, Bermuda Biological Research Station (BBSR) celebrated the 1,000th Hydrostation cruise. Forty-nine years ago, on June 7, 1954, a group of scientists on board the 61-foot research vessel, PANULIRUS, collected water samples 15 nautical miles southeast of Bermuda. Measurements of salinity, temperature and dissolved oxygen were recorded. Approximately every two weeks since the first cruise, scientists and crew from BBSR have returned to this exact spot and repeated the process.

Today, this long-term time series, called Hydrostation "S," is considered to be the longest continuous, year-round examination of any one point in the open ocean. Hydrostation has greatly advanced our understanding of global climate change. Since 1980, the program has been funded by a grant to BBSR from the U.S. National Science Foundation. The wealth of environmental data collected at this site has attracted hundreds of researchers over the years.

Today's scientists are able to analyze samples in laboratories on board BBSR's R/V WEATHERBIRD II, a 115-foot ship in the UNOLS Fleet. The data are supplemented by satellite observations and measurements from sophisticated moorings.

For additional details about the 1000th Hydrostation cruise, visit the BBSR web site at: <http://www.bbsr.edu/Press_and_Pubs/proct2903/proct2903.html>.

Best Wishes for the New Year!

From the UNOLS Office:

Mike, Kate, Laura and Annette

2004 UNOLS CALENDAR OF MEETINGS

Committee	Meeting	Start Date	End Date	Location/Notes
DESSC	Winter Meeting	Jan 25	Jan 25	Portland, OR
FIC	Winter Meeting	March		TBD
Council	Winter Meeting	March		TBD
AICC	Winter Meeting	March		TBD
SCOAR	Winter Meeting	TBD		TBD
DESSC	Spring Meeting	Spring		Woods Hole, MA
Scheduling	Fall Meeting	Sept		Arlington, VA
FIC	Fall Meeting	Sept		Arlington, VA
Council	Fall Meeting	Sept		Arlington, VA
UNOLS	Annual Meeting	Sept		Arlington, VA
RVOC	Annual Meeting	Oct		Bermuda
RVTEC	Annual Meeting	Nov		TBD
DESSC	Winter Planning Meeting	Dec 12	Dec 12	San Francisco, CA
Please visit the UNOLS 2004 Calendar on-line at <http://www.unols.org/2004.html> for the latest information about meeting schedules.				

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. Thank you, Annette DeSilva - Editor, UNOLS News

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