

UNOLS 1995 ANNUAL MEETING

National Science Foundation, Board Room 1235
4201 Wilson Boulevard
Arlington, VA

September 14, 1995

MEETING MINUTES

The UNOLS membership met for their Annual Meeting on 14, September, 1995 at the National Science Foundation, Board Room 1235, Arlington, VA. The meeting was called to order by Ken Johnson, UNOLS Chair at 8:30 a.m. The participants are listed in [Appendix II](#) and the meeting agenda is included as [Appendix I](#). These minutes reflect the order in which items were addressed.

APPENDICES

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Welcome and Introduction - Ken Johnson opened the UNOLS 1995 Annual Meeting by describing his personal experiences over the year with ships of the UNOLS fleet. He spent considerable time at sea in research operations and additionally was able to witness an NSF inspection aboard POINT SUR. He noted the high quality of MELVILLE's SeaBeam capability. Ken noted that UNOLS Fleet as a whole is technically unequalled.

Major issues before UNOLS include the replacement of ATLANTIS II and the status of the Arctic Research Vessel (ARV). The Navy is waiting for a cost estimate from Halter Marine to modify AGOR 25 to a submersible handling platform. The agencies will make a decision on which ship will handle ALVIN after they receive the estimate. The status of the ARV is unclear at this time. We are awaiting the results of the OSB study. The study is expected to be released in October.

Ken noted that challenging times are ahead. At the Spring Council meeting in Monterey, CA, it was made clear that the fleet is facing budgetary difficulties. UNOLS needs to build stronger partnerships beyond our traditional user base. This will be UNOLS's immediate focus.

KEYNOTE ADDRESS

Dr. Michael Purdy, Director of Ocean Sciences Division at the National Science Foundation, provided the keynote address. For the past 20 years Mike has been with the Seismology Group at WHOI. In October he will assume his new position at NSF. He was pleased with this opportunity to meet the UNOLS community and looks forward to meeting his federal counterparts. Mike emphasized that this is a time in which we must all work together. There must be mutual trust and understanding.

As a sea-going scientist, Mike understands that ocean research relies on the capability of the Fleet. He is aware of the university pride associated with operating a vessel. Maintaining the Fleet is essential in continuing U.S. supremacy in Ocean Sciences. The UNOLS mode of operations is working and healthy. Competition among the operators is good for the fleet.

Times ahead will be difficult with reductions in budgets and increased pressure on NSF. We are facing tough decisions: the size of the fleet, should the ARV be constructed, etc. The answers are not obvious. The health of Ocean Sciences will depend heavily on the federal agencies. The agencies must work together. Interagency cooperation is critical and will be a high priority for Mike as he takes on his new role at NSF.

COMMITTEE REPORTS

FLEET IMPROVEMENT COMMITTEE (FIC): Chris Mooers, FIC Chair, reviewed the Committee's near-, mid- and long-term plans, see [Appendix III](#). Intermediate actions currently underway include Coastal Zone Research Vessel (CZRV) planning. Bob Dinsmore is presently developing a Primer on small research vessels. Jack Bash has been coordinating an effort to establish an inventory of small vessels on the World Wide Web (WWW). FIC plans to perform an analysis on CZRV assets, capabilities and requirements.

Other immediate tasks have included development of a quantitative analysis of recent (3-10 years) research vessel use by ocean regions. A UNOLS customer survey was conducted in the spring. A response of approximately 20 percent was received. Generally, the community is satisfied with the UNOLS fleet. However, there is some room for improvement. The major concern seems to be with the scientific post cruise assessments and their lack of feedback. FIC plans to follow up on this. FIC is in the process of completing two studies: (1) Safety responsibilities of Chief Scientists and (2) designs for shipboard vans.

As mid-range plans, FIC will continue to advise on the ARV. They will assist in coordination with FOFCC in the development of a long range science plan. A workshop was held last year to assess the possibilities of using a nuclear submarine for academic science. The workshop report is evolving, but has not been published. FIC is ready to assist in the completion of this report. FIC plans to study the use of UNOLS vessels as continuous monitoring platforms. Both NOAA and NAVOCEANO could benefit by such an arrangement. Representatives from both agencies came to the last FIC meeting. The next FIC meeting will be held at NAVO's office in Stennis, MI. FIC will work with RVTEC to plan for future shipboard technical upgrades.

FIC's long-term plans include oversight for new vessel acquisitions and specialized facilities such as FLIP or AUVs, involvement in ship mid-life reviews, updating the Fleet Improvement Plan and working with DESSC in a replacement for ALVIN.

RESEARCH VESSEL OPERATORS' COMMITTEE (RVOC) - Mike Prince, RVOC Chair, reported on plans for the 1995 RVOC Annual Meeting scheduled for 24-26 October in San Diego, CA. Scripps will host this year's meeting. The first day's agenda will include reports from the committees, agencies and operators. Maritime Health Services has been invited to report on activities over the past year. George

Ireland will report on regulatory issues. Dennis Nixon will provide an update on liability and insurance issues.

The second day of the meeting will include a tour of Scripps's Marine Facility. Mike reported that a workshop will be held to discuss a white paper on the benefits of a university operated fleet. A draft of the paper will be reviewed at the RVOC meeting. Other items to be addressed at the meeting include: Post Cruise Assessments, crew training, increasing shipboard safety awareness, physical standards for crew members and home pages for UNOLS Operators. A tour of the MBARI SWATH currently under construction at SWATH Ocean is being arranged for the afternoon of the second meeting day.

The third day of the meeting will be devoted to roundtable discussions by the operators.

Representatives from outside the UNOLS fleet include operators from Canada, UK, Chile, NATO and Mexico.

A small diving workshop is being scheduled for Monday, October 23rd, preceding the RVOC meetings.

Mike reported that over the past two years, the RVOC Safety Committee has been reviewing the Research Vessel Safety Standards (RVSS). The current standards were approved in 1992. A review is required every three years. The committee has proposed a number of changes. The changes mostly reflect regulatory updates that have come into effect in the past three years. Other changes include corrections to wording. An appendix has been added which provides guidelines for chartering non-institutional vessels by UNOLS institutions. Mike provided the UNOLS Council with an executive summary of the changes at yesterday's Council meeting. The Council approved the changes.

DEEP SUBMERGENCE SCIENCE COMMITTEE (DESSC) - Mike Perfit, DESSC Chair, began his report with a review of this year's ALVIN operations. Operations in 1995 have been going very well. ALVIN is scheduled to complete 177 dives which corresponds to 317 ATLANTIS II operational days. This year to date, ALVIN has completed 130 dives and operations on the whole have been very successful. ALVIN will complete its 3000th dive during the week of 18 September in Juan de Fuca.

In 1996, ALVIN/ATLANTIS II operations are faced with a number of uncertainties and complexities: 1) uncertainties in which ship will be the replacement for ATLANTIS II, 2) ALVIN's overhaul schedule, 3) ATLANTIS II certifications, 4) fiscal and operational constraints, 5) geographically dispersed requests for science operations and 6) the retirement of ATLANTIS II at the end of 1996. In 1996, 128 dives are proposed with only 47 currently funded and the remaining 81 pending, see [Appendix IV](#). Although 1997 is anticipated to be a light operating year, there is still some funded work in the Southern and Northern East Pacific Rise. Mike presented a time line of ATLANTIS II's 1996 proposed operations. Approximately 50 percent of the scheduled work is in a pending status. ALVIN would standdown in September for overhaul and ATLANTIS II would tie up permanently. Mike indicated that time series work will need to find a platform during ALVIN's standdown. DESSC would like to work with the agencies to minimize the impact of down time on deep submergence operations.

In 1996, there are three, possibly four, programs planned for WHOI's ROV facilities, JASON, AMS120 and Argo II. The three programs have operations on the Mid-Atlantic Ridge, Juan de Fuca, and Southern EPR. Interest in 1997 for ROV facilities is high. This year ABE was operated off of ATLANTIS II with excellent success.

Mike continued by reporting on the status of a new support ship for ALVIN. The DESSC supported the concept of modifying ATLANTIS to be the ALVIN handling platform. ONR had reported at DESSC's spring meeting that initial reports were positive that ATLANTIS could be modified to handle ALVIN. A NAVSEA study indicated that this would be feasible, cost would be reasonable and ship construction

schedules would be minimally impacted. Halter shipyard has been tasked to scope out the project and provide a cost estimate by the end of September.

A proposal for navigation upgrades is being developed by WHOI and DESSC and should be submitted soon. Other upgrades are currently in progress for the ROVs including improvement to manipulative capabilities. A study on submersible batteries was performed in the spring. The study examined the bottom time capabilities of ALVIN over past years. A slight downward trend in available battery time was observed. A comparison of batteries currently in use by other submersible operators was performed. The other batteries in use are considerably more expensive than those used on ALVIN and the additional bottom time achieved would not justify the additional cost for use on ALVIN.

In June, the agencies indicated that they continue to be very supportive of the National Deep Submergence Facility (DSF). However, the future funding picture is very unclear, especially for NURP. DESSC emphasized to the agencies that they consider re-establishing a Memorandum of Agreement for the DSF very important.

Two new members have been appointed to DESSC, J.C. Sempere and Cindy Von Dover. Karen Von Damm recently submitted her resignation from the committee, due to her new responsibilities as Chair of RIDGE. Dick Pittenger noted that Jeff Fox left the position of DESSC Chair this past year. Jeff's contributions to the committee and the future of deep submergence science were great. Lastly, Mike announced that the next DESSC meeting is scheduled for Sunday, 10 December, immediately preceding the AGU Conference.

SHIP SCHEDULING MEETING (SSC) - Don Moller, SSC Chair, reported on the results of the Ship Scheduling Meeting and Review held on 11 September. Along with reviews of the ship schedules, the meeting included reports from the agencies, a USCG report on the Polar Class schedules and a demonstration by Robert Hinton on how to access his ship time request form using Netscape. Many of the scheduling issues had been resolved prior to the meeting. NSF funding decisions were made early this year as a result of their earlier submission deadline of February. Additionally, many funding decisions for major ONR programs had been decided early in the year. Communication between the operators has been good.

On the whole, proposal pressure for 1996 is low, see [Appendix V](#). There is only one cruise that remains unscheduled, but most likely will be accommodated. This is a GLOBEC cruise. Scheduling the large ships proposed the greatest challenge. All the large ships need to return home from the southern oceans in 1996. Additionally, they were faced with a number of scheduling constraints: transferring OBS's, scientific party boarding and coordination with the scheduling demands of the fiber optic systems. The schedulers did a good job at economizing on transit times and accommodating science programs. There is concern over the status of KNORR's SeaBeam capabilities. The first two 1996 cruises on KNORR will depend on the SeaBeam operating properly. Tests of the new SeaBeam software on KNORR will be conducted in November.

The schedules of the west coast intermediate ships were coordinated largely due to their mid-life and overhaul plans. The intermediate ship schedules in the northeast Atlantic are closely coordinated. These include DOE work on the global ocean program, ONR's Coastal Mixing and Optics program and the NSF/NOAA GLOBEC program. As a Class, the intermediates, with the exception of SEWARD JOHNSON, will not be operating to their optimum capacity. There is concern over the status of federal funding in 1996, particularly NOAA/NURP funding. A few ships will depend heavily on NOAA/NURP work.

Of all the ships in the UNOLS Fleet, only four will have strong schedules in 1996: EWING, CAPE

HENLOPEN, SEWARD JOHNSON and MELVILLE.

Don concluded his report by presenting ship costs for 1996, see [Appendix V](#). These numbers reflect the budgets the operators feel necessary to support the scheduled operations. In 1996, approximately 4300 days are scheduled with some still pending. This is down from 1995 when approximately 4900 days were scheduled. In 1996, Fleet funding from both NSF and ONR is down. Funding by other sources is up with support from DOE and states.

RESEARCH VESSEL TECHNICAL ENHANCEMENT COMMITTEE (RVTEC) - Rich Findley, RVTEC Chair, reported on the Committee's upcoming annual meeting to be hosted by Moss Landing Marine Lab in Monterey, CA on 16-18 October. Participation by all UNOLS institutions with technician programs is strongly encouraged. Rich reviewed the meeting's tentative agenda, see [Appendix VI](#). The first morning of the meeting will address general business. Elections will be held for the Vice Chair position. A technical session on dissolved oxygen is planned. The Data Standards Committee will report on the status of their activities to be followed by a half day workshop on data standards. A report from the Equipment and Database Subcommittee is scheduled. They will address home pages on the WWW along with searchable data bases. Other items on the agenda include Chirp Sonar, safety in handling over-the-side equipment, and review of UNOLS forms. A representative from the Navy's CNMOC program and NOAA's SEAS program will be invited.

AGENCY REPORTS

OFFICE OF NAVAL RESEARCH - Jim Andrews reported that ONR Research Facilities is anticipating level funding for 1996. He further reported that the CNO Executive Board made a series of proclamations with regard to oceanography. The CEB recognized that the Navy has a fundamental interest in the ocean and oceanography not shared by other agencies. The Navy will continue to emphasize support for ocean research. Although the Navy has been emphasizing coastal science, they do not want to ignore blue water oceanography. They have set their priorities at 40% littoral, 30% blue water and with a 30% overlap of the two regions. Additionally, they will not allow the funding for ONR ocean science not to fall below the 1996 baseline funding. Additional initiatives are still being worked out, however, they are expected to include the revitalization of Navy Chairs. Finally, NAVOCEANO is exploring the option of using UNOLS ships for their survey work. No money has been identified for this future work, but they are hopeful to have a test program on a UNOLS ship in 1996.

Jim reported that ROGER REVELLE (AGOR-24) had a successful launching and is scheduled for delivery in June 1996. ATLANTIS (AGOR-25) construction is on schedule for a January 1997 delivery. The budget and schedule study for converting AGOR-25, ATLANTIS, to a submersible handling ship should be available from Halter Marine by the end of September. ONR and NSF will work towards a quick decision. At present the assumptions are that it will be feasible.

Jim congratulated Annette DeSilva for her considerable work at ONR filling the gap from Keith Kaulum's retirement until Sujata Millick comes aboard. Sujata Millick is currently working for the Senate Appropriations Committee and will not be able to work full time at ONR until the DOD appropriations are signed.

NATIONAL OCEANIC & ATMOSPHERIC ADMINISTRATION (NOAA) - Captain Martin Mulhern reported on present activities, recent changes, and the budget picture for the NOAA fleet. He expressed Admiral Bill Stubblefield's regrets for being unable to attend the Annual Meeting.

Construction of the NOAA AGOR, named RESEARCHER, is on schedule and proceeding well. Delivery is expected in August 1997. The NOAA AGOR is the fourth in the "THOMPSON" class. Marty noted

that NOAA has benefited from close cooperation with the University of Washington, Scripps Institution of Oceanography, Woods Hole Oceanographic Institution, and NAVSEA, as well as the shipyard's experience in constructing the other ships in the class.

Conversion of a U.S. Navy T-AGOS ship to support oceanographic mooring operations and related research is underway, with delivery scheduled in early spring, 1996. Home port will be Honolulu, and the ship will be named Ka'Imimoana. Also underway are repairs to extend (RTE) the life of the fisheries research vessel DELAWARE II.

The NOAA Ship MALCOLM BALDRIGE is deployed along with a number of UNOLS vessels in the Indian Ocean, to provide support to WOCE, OACES, JGOFS, and other programs. The BALDRIGE is operating extremely well. Last year, new evaporators and ship service diesel generators were installed, and several years ago a shaft alignment problem was completely resolved. The BALDRIGE will return to the U.S. in February 1996.

By the end of September the NOAA Ships SURVEYOR, MT MITCHELL, and HECK will be taken off line, joining the already inactive OCEANOGRAPHER, FAIRWEATHER, and DAVIDSON. Plans for disposal are temporarily on hold while regulations concerning PCB's are investigated. Excluding the permanently inactive ships listed above, by October NOAA's fleet will include a total of 18 ships: the T-AGOS ship now in conversion, two T-AGOS ships that are temporarily inactive, plus fifteen other active ships.

In the future NOAA expects to utilize both university-operated and private sector ships to a larger degree. Continued vigorous cooperation between NOAA and the academic community is expected, with healthy cooperation being a "2-way street".

DEPARTMENT OF ENERGY (DOE) - Creighton Wirick of Brookhaven National Laboratories provided the presentation for the DOE representative Curtis Olson. Creighton presented view graphs that are included as [Appendix VII](#). DOE is currently involved in two ocean programs. Their CO2 survey includes cooperation with NSF and NOAA and internationally through JGOFS and WOCE. Although there are two more years in the CO2 program DOE has zero budget to support their part. DOE is planning an extensive Ocean Margins Program which includes 14 UNOLS cruises including scientists from about 30 institutions. The funding of this program is firm for 1995 and 1996. Beyond this time the funding is not clear. DOE is slowly withdrawing from Oceanographic research.

OCEANOGRAPHER OF THE NAVY (OON) - The OON report was presented by Pat Dennis. The Navy's modernization program is winding down. The program will stabilize out at eight survey ships. Two TAGS ships (60 and 61) have been delivered but are not operating as a result of a transformer problem. The third ship is ready for delivery and the keel for the fourth is scheduled to be laid. The Navy has an option on two additional TAGS 60 class ships, however, instead of constructing the sixth TAG, OON may receive the USNS WATERS. USNS WATERS, built as a cable layer, if transferred to the OON would be converted to a survey ship. Cost of conversion is estimated at \$7M.

NAVOCEANO is planning on a modest use of UNOLS ships in 1996. This could expand in the future and supplement the activities of OON's eight core ships.

UNITED STATES COAST GUARD (USCG) - Larry Jendro provided the USCG presentation using a series of view graphs which are included as [Appendix VIII](#). Larry reported that the USCG budget was to decline 20% over the next four years, however, they expect 100% funding in 1996 for operating, maintenance, acquisition and construction funds for the Polar Icebreakers. No science missions have been requested for 1995 or 1996. A mission has been proposed for 1997.

An International agreement has been worked out with the Canadians that would grandfather ships with CASPPR compliance if they are launched prior to 31 December 1998. HEALY is scheduled for launching prior to that time. HEALY is on track for construction starting next year. HEALY's home port has not yet been decided. Ports under consideration include Boston, Norfolk and Charleston on the east coast and Seattle on the west coast. A shore side staff of 65-70 will be in support of HEALY. The cost for science use of HEALY is estimated at \$16-20K per day. This includes 60% of the helicopter cost, 40% maintenance and 100% fuel. Characteristics of this ship are included in [Appendix VIII](#). Major changes that were included in the HEALY design as a result of the 1993 Science Advisory Committee include the addition of a multibeam system. HEALY modules will start construction in March 1996 with delivery scheduled for June 1998.

DEPARTMENT OF STATE (DOS) - Tom Cocke provided the Department of State presentation. Tom's office has seen an increase in requests for foreign clearances by 15 to 20% to now about 400 per year. Half of the clearance requests are coming in late. Participation by the foreign state scientists has been increasing. Tom reported that the 18 to 20 Indian Ocean clearances have been working well. Brazil clearances seem to be less of a problem. The number of requests for Mexico have been decreasing. Tom will be going to Mexico this year in an effort to improve clearance procedures with that country. Two clearances were received from Russia this year which is an improvement.

NATIONAL SCIENCE FOUNDATION - Dolly Dieter provided the report for NSF by informing the meeting participants that funding would be very tight for 1996. Many ships would not be fully utilized and the Intermediate Class will have the greatest problem. Dolly is also concerned with the funding of the mid-life refits in 1996. NSF is expecting an overall 1% budget cut in 1996, with internal budget adjustments, this could equate to a decrease of 3% from 1995. NEW HORIZON has a proposal in for a mid-life refit. CAPE HATTERAS has also indicated a need for a stretch mid-life. POINT SUR is scheduled for an extended overhaul.

UNITED STATES GEOLOGIC SURVEY (USGS) - The presentation for USGS was given by Jan Morton. A small reduction is expected for the 1996 USGS budget. The Survey is going through a major internal reorganization which includes a 30% reduction in personnel. They will be placing more emphasis on coastal and near shore studies. USGS operates three small coastal vessels. They are located at , Puget Sound, UC Santa Cruz and USF St Petersburg. POWELL has been transferred to TAMU. The TAGOS they acquired from the Navy is now in the Marshall Islands operating for the Army on a 3 year charter agreement. USGS anticipates modest ship requirements from UNOLS of the Intermediate and smaller size.

USCG - PRESENTATION BY RADM PESCHEL - Radm Rudy Peschel from the Office of Navigation Safety spoke to the membership. Admiral Peschel explained that the two USCG polar icebreakers have been undergoing a year long mid-life overhaul. POLAR STAR is scheduled to recommence operations this fall. These ships are under-utilized by the science community. The Coast Guard is anxious to cooperate and if all was not well in the past we must start with a clean slate and open mind. We must all consider the available platforms and determine how to best utilize these platforms.

UNOLS MEMBERSHIP VOTE

The UNOLS Membership voted to accept the UNOLS Charter change as indicated by [Appendix IX](#). The change would allow the UNOLS Office to stay with the same institution for nine years.

"POTENTIAL CHANGES ON THE HORIZON FOR THE UNOLS FLEET"

Peter Betzer chaired an ad hoc committee to examine the "Potential Changes on the Horizon for the UNOLS Fleet". Included in his committee are: D. Hayes, R. Knox, C. Mooers, R. Pittenger and R. Wall. The committee developed a draft paper to address the issue of declining funding and an excess of ship capacity. They responded to the following charge.

1. Review the budget projections of Don Heinrichs for UNOLS ship operations, giving special regard to the possible expanded participation of supporters/users, other than NSF (i.e. ONR, NRL, NOAA, USGS, MMS, DOE, EPA and NASA);
2. Within reasonable budgetary assumptions, assess a general model for the UNOLS Fleet requirements for supporting science. This assessment should be based on the model the UNOLS Fleet Improvement Committee projected for the year 2000 but modified to more accurately reflect current status and updated projections;
3. If any imbalance exists between requirements and resources, offer suggestions as to how we might best reconcile the mismatch? (i.e. increase the user base, reduce the fleet, and/or go to different modes of operation);
4. What UNOLS operational/fiscal changes would work best for the U.S. oceanographic community;
5. Could fleet realignment lead to a more effective use of our ships? If so, what are the particular criteria that should be used to evaluate the merits of shifting sea-going assets.

Fleet operating costs projections were provided which included the new ships that would be coming on-line. Funding projections were also provided from information collected from the agencies see [Appendix X](#). A significant shortfall of funds necessary to operate the UNOLS fleet continues to grow to an alarming gap by the year 2000. Peter explained that the committee intended to continue work on the report but it appeared that one thing was clear. UNOLS should strive to increase its federal user base. Other recommendations include encouraging states support. Peter pointed out the substantial support provided by both Washington and California towards their respective ship operations.

UNOLS ELECTIONS

The Council slate was presented to the membership for voting. Dick Pittenger was re-elected to the Council Member At-large position. Bob Wall was re-elected as Council Member from a UNOLS Non-operator institution.

UNOLS ISSUES

Issues before UNOLS:

KNORR/AGOR-25 - Jim Andrews had provided the information on the plans for a submersible handling ship in the ONR report.

Arctic Research Vessel - Action on the Arctic research vessel has been put on hold until the study by the National Academy is published.

Organization of UNOLS/HEALY Committee for USCG - The action as to whether or not to form a standing committee is also on hold awaiting the National Academy study on Arctic facilities. An interim committee of 5 people will be formed to interact with USCG on plans during construction of the vessel.

Coastal Zone Research Vessel Plans/Activities - The Fleet Improvement Committee believes that orderly planning is needed to investigate coastal zone research facility needs. Because it takes up to ten years from the beginning of planning until a ship is on-line, we must start now. Chris Mooers believes that this is best done by working through consortia that cover the various coastal regions.

Primer/Inventory Of Small Research Vessels - Chris Mooers reported that the FIC is working on a primer for small boats. This will provide those characteristics that would be desirable in small research vessels. Coupled with this is an inventory that is being established on the World Wide Web through University of Delaware's Oceanic.

UNOLS On World Wide Web - UNOLS has a home page that provides access to the WWW. This is connected with Oceanic at the University of Delaware where access to the ship schedules and ship characteristics resides. UNOLS is also developing a procedure to request ship time that will eventually replace the need for the NSF Form 831. The electronic filing of ship time requests will not only make the process more efficient but will permit greater coordination and provide for archival data for analysis.

Nuclear Submarine For Oceanographic Research - Two cruises have already been conducted aboard nuclear submarines and three more are planned. A Broad Area Announcement has gone out announcing the opportunity for the next cruise. There will be a multi-agency committee coordinating the cruise, with Tom Curtin from ONR as the Chair. The SOONS update report is in the process of being completed.

Mid-Life Refits - Plans for a POINT SUR mid-life refit is on hold for now until there are adequate funds and time. However, an extended overhaul has been requested for early 1996.

A proposal for NEW HORIZON's mid-life refit for 1996 has been submitted. The proposal is straight forward with plans to correct long standing problems. The areas to be examined include: stability, payload versus endurance, operational maintainability and improved habitability. The ship will be grandfathered in regard to admeasurement resulting in a savings in funds. The mid-life is scheduled to begin late this year and proceed through the early months of next year, but is contingent on funding. Scripps plans to cost share the mid-life with NSF on a 20:80 split (Scripps:NSF). This is based on the percentage use of the ship by State and Federal agencies.

A stretch of CAPE HATTERAS is being considered by Duke/UNC. Funding to perform a study on the stretch has not been identified.

Status of COLUMBUS ISELIN - Tom Lee from University of Miami reported on the present status of ISELIN. The ship has been repaired with a new bottom and berthing. It is tied up at Harbor Branch's facility. The vessel is up for sale at a price of \$2.6 million. It has been listed with ship brokers and there have been some leads. The University of Miami wishes to continue their marine operations program. Negotiations with HBOI continue for a cooperative arrangement. They are also working on a cooperative agreement with the University of Texas and Texas A&M for vessel operations including perhaps operations of a new vessel.

Radio Operator/GPS - Dick Pittenger is continuing his efforts to get UNOLS' large ships exempt for the requirement to carry a Radio Officer. The exemption may get passed this year.

P-Code GPS is now operating on the vessels operated by Scripps, University of Washington and WHOI. Efforts to get P-Code access for University of Hawaii, URI, OSU and LDEO are underway, but facing a lot of red tape. Those ships with P-code GPS have had great success, although it was emphasized that maintaining the P-code systems required a large paper-work load because of the security requirements.

UNOLS COMMITTEE APPOINTMENTS - The following individuals have been appointed to the

Fleet Improvement Committee: Larry Atkinson of ODU will replace Don Wright. Bess Ward of UCSC would replace Tom Royer and Tom Weingartner of University of Alaska will replace Ken Johnson.

Mike Perfit announced two nominees for DESSC. These are Cindy Van Dover, West Coast Science Director for NURP, and J.C. Sempere, a geophysicist from University of Washington with expertise in remote sensing and deep towed vehicles. The Council approved the nominations.

A summary of the 1994 UNOLS Cruise Reports is included as [Appendix XI](#). A copy of the UNOLS Directories is included as [Appendix XII](#).

The meeting was adjourned at 2:30 p.m.