UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

UNOLS COUNCIL MEETING

SUMMARY REPORT

17 September 1997

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

UNOLS Council Meeting Report
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Appendices

Wednesday, 17 September 1997

INTRODUCTION - The UNOLS Council met in Room 1235 of the National Science Foundation on 17 September 1997. The meeting was called to order at 8:30 a.m. by Ken Johnson, UNOLS Chair. The items of the agenda, ***Appendix I,*** were addressed in the order as reported below. The participants of the meeting are listed in ***Appendix II***.

ACCEPTING MINUTES - The minutes from the July 1997 Council meeting were accepted as amended (page 8 was corrected, replacing "PMEL" with "NOAA."

COMMITTEE REPORTS - The Committee Chairs submitted their written reports in advance of the meeting and are included as ***Appendix III***. Each report was briefly summarized by Ken Johnson. The chairs provided any updates and additional information not included in the written reports.

Research Vessel Operators' Committee (RVOC): Paul Ljunggren reported that the RVOC meeting agenda has been changed. The three planned workshops will be replaced with a report from Bill Hurley of The Glosten Associates. His report will address the

impact new regulatory changes may have on the current and future UNOLS Fleet operations.

Fleet Improvement Committee: Ken Johnson reported that Chris Mooers' term as FIC Chair is ending and Larry Atkinson will be the new FIC Chair. Chris distributed a draft Interim Fleet Improvement Plan along with a memorandum to the FIC and Council with his reflections regarding UNOLS.

DEep Submergence Science Committee: Mike Perfit reported that on September 16, SIO hosted a meeting to investigate the future of ATV as a science tool. The issue will be addressed by the Council later in the meeting.

Ship Scheduling Committee (SSC) - Ken Johnson provided a viewgraph, ***Appendix IV***, with the statistics of ship usage from 1995 through 1998. The ship day totals are down almost 500 days from last year. The table also depicted the increase of ship time for the smaller ships with a decrease of large ship time. The agency summaries over the years reflected the reduction in ship use, primarily for NSF, over this period. Ken presented a ship cost summary for 1998, ***Appendix V***. This summary was provided by the individual ship operators representing their anticipated costs based on the schedules presented at the 15 September Ship Scheduling Committee Meeting. In past years the total costs exceeded the anticipated funds available from $3M to $10M. This year the total was nearly $5M less than the anticipated funds available for 1998. There was a general discussion on ship use trends. It was noted that there are no large field programs on the horizon.

Ken concluded by noting that pressure for the use of ALVIN and the deep submersible tools is high in 1998. Scheduling of these assets has been a complex, iterative process. With the exception of the scheduling the deep submergence assets, the remainder of the scheduling meeting went smoothly with few issues to be resolved at the meeting. As a result, Ken suggested that the format of the scheduling meeting needs to be reviewed to determine its effectiveness.

Federal Agency Reports -

Department of State (DoS) - Tom Cocke reported that clearance difficulties remain with Mexico and Russia. There have been an increasing number of coastal states providing late responses to clearance requests. Additionally, jurisdictional disputes between countries have resulted in instances of delays in issuing clearances. Tom reported that a greater number of coastal states are requesting to participate in coastal science cruises. This often results in additional logistics and travel expenses for the PI and reduces the bunk space available for the science party.

Tom provided statistics reflecting the trend toward fewer clearance requests being submitted on time. In 1997 only 37% of the requests to date were submitted on time. These late requests could be impacting the problem for late coastal state responses. Ken Johnson suggested that a subcommittee be established to examine what is causing the late

submissions and what can be done to alleviate the problem. It was suggested that a mechanism be integrated into the web-based ship time request form to electronically remind PIs that a clearance request is needed.

National Oceanic and Atmosphere Administration (NOAA) - CDR Beth White provided the report for NOAA, see ***Appendix VI***. She began by reporting that the Memorandum of Understanding between NOAA and UNOLS is scheduled to be signed by Jim Baker Ken Johnson immediately following the Council meeting. AQUARIUS, an underwater laboratory, has been reactivated and is located in the Florida Keys. Fisheries will have $2.1M in the 1998 budget for concept design of the next generation fisheries research vessel. NOAA expects to charter 285 ship days of UNOLS ships in 1998 costing approximately $2.8M. RON BROWN completed its first science program, a PACS cruise, from 21 July to 6 September. The ship is presently on the first leg of a Vents cruise off Oregon. KA'IMIMOANA continues its work in the Pacific with the TOGA TAO buoys. The A76 process is proceeding on schedule which will determine the most cost effective way that this ship should be operated. The conclusion and results of this process are expected by May 1998. Beth reported that a bill to disestablish the Corps has been introduced, but for the time being the Corp is still active.

National Science Foundation (NSF)- The NSF report was provided by Don Heinrichs. His viewgraphs are included as ***Appendix VII.*** Lisa Rom has returned to NSF and will be working half time as Assistant Program Director for the Oceanographic Technology and Interdisciplinary Coordination (OTIC) Program. Sandy Shor will continue on as Program Director for Instrumentation and Technical Services for the rest of the year. This position will be advertised in the near future. The 1998 NSF budget is still in Congress. An increase over 1997 of 2.1% is likely which would bring the Ocean Science budget to $206.2M. The Facilities budget would most likely remain level funded at $52.3M. Don reported that at least one UNOLS ship would be laid up in 1998. Additional or continuing lay-ups are anticipated for 1999.

The UN has designated 1998 as the Year of the Ocean. EXPO '98 will be held in Lisbon, Portugal. Mike Reeve has been designated as official coordinator for NSF. NSF will encourage "outreach" activities associated with this event.

Don provided the details of the Government Performance and Results Act (GRPA) as it relates to NSF Facilities, see ***Appendix VII.*** The NSF required documents for the GRPA will include 1) a Strategic Plan; 2) an Annual Performance Plan (goals and objectives) and 3) Documentation of Workforce Issues. Significant effort will be necessary to keep these plans current. Changes to the cruise reporting form may be necessary to assist in collecting the data. Don thanked Annette DeSilva for her work in providing statistics for the GPRA pilot review this year. An NSF Committee of Visitors (COV) will review the plans every three years.

Don announced that a new publication "Grant Proposal Guide" has been published. Copies were available for the Council with additional copies available upon request. Also available was the publication "Instruction for Preparation of Proposals".

Naval Oceanographic Office (NAVO) - CDR Jim Trees provided the NAVO report (see ***Appendix VIII***). The first year of the NAVO/UNOLS partnership has been a success. Approximately $6.3M was provided for 432 UNOLS ship days and $769K for data processing. The planning went from concept to execution with few perturbations. The number one requirement of two fleet commanders were met. The UNOLS effort ensured an earlier forward deployment of two T-AGS-60 ships. Tactically significant data and Fleet requirements were accomplished.

Oceanographer of the Navy (OON) - Sujata Millick reported for the OON. She announced the U.S. Navy "Name This Ship" Contest for the T-AGS 64 and passed out the brochure, ***Appendix IX***. The OON in partnership with the Navy League, National Geographic Society and the Navy Memorial are sponsoring this contest for school children K-12. The winner will be invited to attend the ship's christening and launch ceremonies.

Office of Naval Research (ONR) - Sujata continued with a report from ONR. Level funding is expected for the ONR Facility budget which should be approximately $5M. The ONR use of UNOLS ships has gone down in 1997 and 1998, however, is expected to grow in the out years. The Navy's inspection (INSURV) is being conducted on KNORR this week. THOMPSON is scheduled for an INSURV in October. The NAVSEA/SCN funding ends in September 1997 for REVELLE and May 1998 for ATLANTIS. A study by The Glosten Associates has been funded to evaluate the fuel efficiencies and propulsion problems experienced on the AGORs.

Sujata distributed a copy of the ONR "Commerce Business Daily Announcement for Operator Selection" for the newly funded AGOR 26 (see ***Appendix X***). Interested parties are to request the RFP by 17 October 1997. Proposals are due 5 December and a decision is expected by January 1998. ONR is investigating the use of the CNR 804 process for the design and construction of this ship. Under this process the designing and construction of the ship is accelerated through the early participation of industry.

Frank Herr continued the ONR report by noting that within ONR the Ocean Science Division are held in high regard by Admiral Gaffney. The budget for ships and science are reasonably level and they are working to at least maintain the budget at a level state. Mike Craig along with John Orcutt have been awarded the Walter Munk Award - Congratulations. In other personnel announcements, Frank reported the need for IPA's to serve as program Officers. In particular they are seeking high-latitude expertise. Frank Herr concluded by announcing that ONR was pleased to present Sujata with a promotion.

United States Coast Guard (USCG) - CDR George Dupree who replaced CDR Rick Rooth in August as Chief, Ice Operations Division gave the USCG report. CDR Dupree

explained that POLAR STAR has completed a ten-month overhaul and is now on a Deep Freeze deployment to Antarctica. POLAR SEA is entering a six month shipyard period and should be available for a Science of Opportunity cruise in the spring. A two month cruise is planned for equipment shakedown and crew training. The Coast Guard would like to allow four weeks for science. HEALY is scheduled for launch on 15 November 1997 with a delivery date scheduled for December 1998. Unrestricted operations are scheduled for 2000. The decision of homeport has yet to be made. The Coast Guard would like to increase training for their crew in preparation for science operations on HEALY. CDR Dupree requested any operators that may have openings on their ships for crew to contact him. CDR Dupree announced a GS-13 position vacancy in their Washington, DC Office. This person would be the civilian liaison with the community. They hope to have the position filled by the end of the year.

Consortium for Oceanographic Research and Education (CORE) - Dan Schwartz presented the CORE report. CORE has been selected as the National Oceanographic Partnership Program (NOPP) program office (see ***Appendix XI***). Two of the three NOPP Office positions have been filled as this office begins to organize. They will be coordinating a "Virtual Ocean Data Center Workshop" which will be a web-based forum. The NOPP Office is assisting in the development of Terms of Reference for the National Oceanographic Research Leadership Council (NORLC). They are helping to establish the Ocean Research Advisory Panel (ORAP) charter and membership. The NOPP Office will prepare an annual report to congress on the progress of NOPP. Dan reported that the 1998 program will have many of the same elements as in 1997 and is expected to be funded at $28.5M with $7.5M for the Navy use of UNOLS vessels. For FY99 the program should be included in the various agency budgets. Ten agencies have expressed interest in supporting the Partnership Program in out years.

UNOLS ISSUES

NOAA/UNOLS Cooperation - RON BROWN was included in the 1998 UNOLS scheduling process as part of the cooperative efforts between NOAA and UNOLS. Brown's schedule for 1998 contains only NOAA funded science. However, in 1999 BROWN will likely be scheduled into the Indian Ocean and could accommodate programs of NSF, ONR and/or NAVO that would traditionally be the work for UNOLS ships. In return, NOAA programs in the Atlantic and Pacific would likely be scheduled on UNOLS ships. NOAA is planning approximately $2.8M for UNOLS ship time in 1998 which could increase in 1999.

UNCLOS Discussion - Dan Schwartz continued with a report on the status of the UNCLOS. Dan provided a copy of an article, "LOS and the Academic Research Scientist" by J. ASHLEY Roach, see ***Appendix XII***. CORE recently conducted an abbreviated study of the effect on science of the U.S. not signing the Law of the Sea Treaty. Dan Schwartz reported that the premise of the study was that foreign coastal states may be less receptive to the U.S. clearance requests for work in their waters and

that this may be a cause for the increase in delays and declines. CORE conducted a telephone survey, requesting facts and opinions regarding the U.S. position regarding the LOS. Dan noted that the survey was not scientific in nature. The preliminary findings of the survey indicated that there have been few actual sitings of problems related to the U.S. not signing the LOS. However, the consensus was that signing the treaty can only help with the process of gaining clearance responses. It was noted that one problem with the current situation is that the U.S. can not take part in conflict resolution and that the "implied consent" portion of the law can not be utilized. The Council agreed that CORE should continue to take the lead in this issue.

NOAA Fishery Needs - CDR Rick Brown from the NOAA Corps provided a summary of the ship requirements for NOAA's National Marine Fisheries Service. NMFS is presently utilizing eight NOAA ships for 1700 days of in-house fish assessment and research. In addition they are chartering 400 days. Their plan is to build six new fishery research vessels to replace their aging fleet. These will be capable of both stock assessment and oceanographic research. They are looking to universities for cooperative efforts. The 1998 NOAA budget includes $2.1M for a concept design of the new fisheries vessels. Low acoustic signatures are considered very important for these vessels. NOAA will be working with the Navy for the newest quiet ship technology. NOAA is hopeful that the 1999 budget will contain construction money for the beginning of this new class of ships.

ENDEAVOR/OCEANUS Discussion - WHOI and URI submitted identical 1998 schedules for OCEANUS and ENDEAVOR realizing that one ship would be laid up. Neither institution volunteered their ship but instead asked that Ken Johnson mediate the decision. Ken received letters from the operators of both institutions as well as letters from scientists. It was noted that 13 of the scheduled cruises had WHOI PI's with associated ship loading and unloading requirements. Also, the ship characteristics of OCEANUS seemed to be better suited for the required field work. It was noted that OCEANUS had been the last ship to lay up. Ken's recommendation was that ENDEAVOR should lay up for 1998 but that a strong schedule should be developed for this ship in 1999. In the event of another year of low ship time requests, Ken recommended that all of the east coast intermediate ships be included into the lay-up rotation schedule including SEWARD JOHNSON. It was the consensus of the Council to endorse the sentiments of Ken's letter and forward it to NSF. The Council added that under the presumption that a similar scenario exists to some degree in 1999, the preference is to not lay-up ENDEAVOR.

Long Term Utilization of the UNOLS Fleet - The Council discussed at length the long term utilization of the UNOLS Fleet. It was suggested that the past may not be a guide for the future. There were concerns that there were no mega-programs such as WOCE and JGOFS on the horizon but we should not react on short term trends. The concern was that it is easy to retire a ship but it takes ten years to bring one on line. The science cycles are counted in years while ship cycles are in decadal time scales. This mismatch can be the cause of lean years.

Mike Purdy was asked about the long term prognosis of shipboard science. He indicated that the number of focused initiatives is constantly increasing. There are, however, no large programs on the table for the next two years. This period is a time of data interpretation and assimilation. NSF is reviewing the four disciplines as well as interdisciplinary science asking where the most exciting science opportunities may be in the next few years. The results of this inquiry will be shared. The Council agreed that a plan was necessary to deal with the lean years.

Application for UNOLS Membership - The Council briefly reviewed the request for membership by The New Jersey Marine Sciences Consortium. A subcommittee of Bob Knox, Rich Jahnke and Clare Reimer has been established to review the UNOLS Charter, including annexes, defining what an "Institution" is as used in the Charter, and how consortium fit into this definition. The membership request was deferred pending the outcome of this subcommittee.

SEA CLIFF Retirement - Mike Perfit's comments relating to SEA CLIFF are included in his written committee report, see ***Appendix III***. He commented that to date, a decision has not been made by the Navy on the future use of SEA CLIFF after de-activation.

ATV Retirement - In the spring, the Navy announced the possible retirement of the ATV (Advanced Tethered Vehicle). Scripps indicated an interest in operating the ROV and hosted a meeting on 16 September to discuss with the community some of the options for use and operation of the vehicle. WHOI, DESSC and agency representatives attended this meeting. WHOI also expressed an interest in being the operator for ATV. DESSC recommended to the agencies that ATV should be made available to the academic community if it is retired from the Navy. DESSC requested additional information on the vehicle to determine its capabilities. Community input will be solicited at the San Francisco AGU Meeting. Costs for operation are of concern. DESSC, SIO, and WHOI will continue to assess the viability of operating this vehicle after receiving community input and evaluating its capability and operating costs.

Scheduling Improvements - Jack Bash provided a summary of the Ship Scheduling Procedure Review Committee efforts. This subcommittee, chaired by Rich Jahnke, was charged to look at perceived weakness in the ship scheduling process. A summary of Jack's remarks are included in the viewgraph included as ***Appendix XIII***. The viewgraphs include the committee's recommendations along with the actions to date.

AGOR Z-drive Thruster Status - Dick Pittenger provided an update on the AGOR Z-drive thruster problems, see ***Appendix XIV***. The Glosten Associates are presently studying the cause of these failures. It would appear that there have been several different causes for the various failures including defective manufacturing. Where no spares are available, as with the upper unit on THOMPSON, it takes 13 weeks for manufacture and delivery of replacement units. This presents an unacceptable situation. After receiving the results of the Glosten study a course of action will be recommended to ensure greater reliability.

Ship Inspection Program - Jack Bash reported that a contract has been let to Jamestown Marine Services to conduct the NSF inspection on the non-Navy vessels of the UNOLS Fleet. The first inspection has been completed on LAURENTIAN. This inspection went well. An aggressive inspection schedule is planned.

White Paper on Crewing Requirements - A contract was let to The Glosten Associates to study the impact of new regulations with respect to fleet operations and new ship construction. A preliminary presentation of this study is scheduled for the RVOC meeting in October.

Interim Fleet Improvement Plan - Chris Mooers provided the Council with a revised draft of the Fleet Improvement Committee Interim Fleet Improvement Plan. The Council was asked to review the document and provide feedback to Ken Johnson for finalization.

Long Range Issues - The Council opened discussion on long range issues that should be considered. These included the need to consider new construction, particularly with the intermediate ship class. This effort should get started after hearing the results of the Glosten study on crewing and admeasurement. There was expressed a need that our community become more pro-active on issues and take a greater advocacy role. It was also suggested that the community as a whole needs to get involved and have a greater understanding of the UNOLS activities. Forums at AGU and the Oceans Sciences meetings were suggested.

UNOLS Brochure - Plans to update the UNOLS brochure are in process. The format will be similar to the present format. Vicky Cullen, WHOI, who prepared the original brochure has agreed to put together the update. Suggestions for the update are welcome.

Dues - Jack Bash reported that the balance of UNOLS dues for 1996 was $3,603.86. A total of $1450.00 was collected for 1997. To date in 1997, $1,300.00 has been expended leaving a current balance of $3,753.86. The 1997 expenditures included $100.00 to Hospice in memory of Marcus Langseth, $1000.00 for a Marcus Langseth memorial and $200.00 deposit on the 16 September evening UNOLS reception.

UNOLS Council Slate - Dennis Hayes, chair of the nominating committee, presented a slate for the Council elections. This slate is included as ***Appendix XV.***

Thanks to Out-going Council Members - Dennis Hayes, Cindy Lee and Chris Mooers were thanked for their efforts on the UNOLS Council.

The meeting adjourned at 5:00 p.m.

NOAA/UNOLS MOU Signed - Immediately following the UNOLS Council Meeting, the NOAA/UNOLS MOU was signed by NOAA Director, Dr. James Baker and UNOLS Chair, Dr. Kenneth Johnson.

APPENDIX I

Revised: 9/15/97

UNOLS COUNCIL MEETING
Wednesday, 17 September 1997, 8:30 a.m.
National Science Foundation, Room 1235
4201 Wilson Boulevard
Arlington, VA

Call the Meeting: Ken Johnson, UNOLS Chair, will call the meeting to order at 8:30 a.m., 17 September 1997.

Accept Minutes of June, 1997 Meeting.

COMMITTEE REPORTS: Ken Johnson will provide a brief summary of the UNOLS Committee written reports and open the floor to a question/answer period. (Prior to the meeting, Committee Chairs submitted written reports for distribution to meeting participants.) Chairs will identify any important issues that need to be addressed further by the Council.

AGENCY and OTHER REPORTS: Reports from agency representatives on funding outlooks, facility updates, and special projects:

Department of State - Tom Cocke
National Oceanographic and Atmospheric Administration - CDR. Beth White
National Science Foundation - Don Heinrichs
Naval Oceanographic Center - Capt. Dieter Rudolph
Oceanographer of the Navy - Pat Dennis
Office of Naval Research - Sujata Millick
United States Coast Guard - CDR. George Dupree
Consortium for Oceanographic Research and Education - Capt. Daniel Schwartz

UNOLS ISSUES:

Science Mission Requirements for Central Pacific - Sujata Millick will provide the status on the Navy's plan for construction of a Central Pacific research vessel.

NOPA 2 - Dan Schwartz will give an update on plans and funding status for NOPA-2.

NOAA/UNOLS Cooperation - Ken Johnson will review the status of the NOAA-OAR/UNOLS Memorandum of Understanding.

UNCLOS Discussion - Tom Cocke will report on the potential impact of the U.S. decision not to ratify the United Nations Convention of the Law of the Sea (UNCLOS). Dan Schwartz will provide an update on CORE's study on this issue.

NOAA Fishery Needs - Ken Johnson will open a discussion on NOAA fishery needs.

ENDEAVOR/OCEANUS Discussion - Ken Johnson will open a discussion on his recent letter to Dolly Dieter regarding ENDEAVOR and OCEANUS in 1998, see ***Attachment 1***.

Long Term Utilization of the UNOLS Fleet - Discussion on 1998 ship utilization and ship use projections for the future.

Consortia Membership Issue - Discussion on UNOLS Membership issues in relation to consortia.

Charter Review - Cindy Lee will report on the ad hoc committee plans to review the UNOLS Charter and Council structure.

SEA CLIFF Retirement - Sujata Millick will review plans for the future of DSV SEA CLIFF following its retirement from the Navy. Mike Perfit will review DESSC's recommendations regarding SEA CLIFF's future.

ATV Retirement - Bob Knox will summarize the ATV meeting discussions held on 16 September. Mike Perfit will report on DESSC's preliminary recommendations regarding the retirement plans for ATV.

Ship Scheduling Improvements - Jack Bash will report on the progress of the improvements to the UNOLS ship scheduling process.

AGOR Z-drive Thruster Status - Bob Knox and Dick Pittenger will review the latest status of any AGOR Z-drive issues.

Ship Inspection Program - Jack Bash will provide the status of the UNOLS Ship Inspection program.

White Paper on Crewing Requirements - Jack Bash will provide the status of the contract to The Glosten Associates for their efforts to address the impact of Coast Guard Regulations regarding crew size requirements.

Interim Fleet Improvement Plan (IFIP) - The revised Interim Fleet Improvement Plan as provided by Chris Mooers will be reviewed.

Long Range Issues - Identification of long range issues for UNOLS Council attention.

Application for UNOLS Membership - The New Jersey Marine Sciences Consortium has applied for UNOLS Membership. A copy of their application along with information about their consortium is included as ***Attachment 2***.

UNOLS Brochure - Annette DeSilva will provide an update on plans for updating the UNOLS brochure.

UNOLS Dues - Jack Bash will provide an accounting report of the UNOLS dues budget.

UNOLS Council Membership - Dennis Hayes, Nominating Committee Chair, will present the slate of candidates for replacement of those Council members completing terms. The terms of Dennis Hayes, Bob Knox, and Cindy Lee are expiring.

Calendar for UNOLS Meetings:

MEETING	LOCATION	DATES
Ship Scheduling Committee	Arlington, VA	15 September 1997
Scheduling Review	Arlington, VA	16 September 1997
UNOLS Council	Arlington, VA	17 September 1997
UNOLS Annual	Arlington, VA	18 September 1997
RVOC	Woods Hole, MA	21-23 October 1997
RVTEC	Seattle, WA	27-29 October 1997
FIC	TBD	Fall, 1997
DESSC	San Francisco, CA	7 December 1997
AICC	New Orleans, LA	Jan/Feb 1998

Adjournment

APPENDIX II

Council Meeting - September 17, 1997

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John Bash	UNOLS	(401) 874-6825/(401) 874-6167/unols@ gso.uri.edu
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Bob Knox	SIO/UCSD	(619) 534-4729/(619) 535-1817/rknox@ucsd.edu
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Sujata Millick	ONR	(703) 696-4530/(703) 696-2007/millics@onr.navy.mil
Don Moller	WHOI	(508) 289-2277/(508) 457-2185/dmoller@whoi.edu
Chris Mooers	RSMAS/U of Miami	(305) 361-4825/(305) 361-4797/cmooers@rsmas.miami.edu
Mike Perfit	U of Miami	(352) 392-2128/(352) 392-9294/perfit@geology.ufl.edu
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Alan Thomas	NOAA/OAR	
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APPENDIX III

Committee Reports to the UNOLS Council
September 1997

Research Vessel Operators' Committee:

The 1997 RVOC meeting is scheduled to be held at Woods Hole Oceanographic Institute in Woods Hole, Massachusetts on 21, 22, 23 October 1997. We have a full agenda for this meeting. In order to keep to this schedule many of the first days reports, specifically the "Special Reports" will be submitted as written reports with the period previously devoted to presentation of these reports now primarily being devoted to questions and answers. Of note on the agenda is-

- Introductory presentation by Jamestown Marine. Jamestown Marine has been awarded the contract for the NSF ship inspection. They will be on hand to meet the members of RVOC and introduce personnel who will be carrying out the inspections.

- A presentation will be made on marine communications. Existing and new systems that permit more effective communication and can be used to extend the Internet to sea. In conjunction with this there will be a presentation by SeaNet on JOI's recently funded proposal to provide five Inmarsat B installations on R/V's.

- Three workshops are presently being planned to address the following topics:
    * Tech./Operator workshop - Invite reps. from RVTEC to discuss their needs and what operators should do to increase the technical viability of their platforms.
    * Medical standards workshop-Follow on to last year's work group.
    * Workshop to identify and standardize ancillary service and equipment costs normally charged to programs.

Other RVOC Activities Include:

The Safety Committee has assigned members to review and update of the various chapters of the RVOC Research Vessel Safety Standards. This revision is due in January 1999. Two new topics which need to be included in the Safety Standards are Standards of Training, Certification and Watchkeeping for Seafarers (STCW) and Global Maritime Distress and Safety System (GMDSS).

The proposal for a Safety Training Video was funded. A meeting of the Safety Committee to address the production of this video is scheduled for 1,2,3 October 1997 at URI - GSO. Jamestown Marine was selected to produce the video and will be present for the meeting. Items to be addressed include:

* Selection of topics to be covered in the video. These topics will be selected from Chapter I of the RVOC Safety Training Manual. Chapter 1 is the Research Party Supplement.
* Establish schedule for script preparation.
* Establish review and control procedures.
* Discussion of ideas for shooting video.

* Ship availability for shooting.

Submitted by Paul Ljunggren

Fleet Improvement Committee:

1. The IFIP97 has been further revised into the (hopefully) final draft form for the Council's review.

2. Increments have been added to the draft FIP98 by various FIC members.

3. Activity associated with planning for the construction of a mid-Pacific R/V has been placed on hold by ONR.

4. With cancellation of the FIC summer meeting on short notice, FIC does not have its usual high level of activity to report.

5. A message has been prepared for the Council (w/cc to FIC) summarizing the accomplishments and shortfalls of FIC over the past three years, and providing several recommendations.

Submitted by Chris Mooers

DEep Submergence Science Committee:

DESSC's deliberations and planning with the Deep Submergence Facility (DSF) operator, WHOI, and national funding agencies have resulted in an upgraded and completely overhauled ALVIN which has successfully been merged with the new R/V ATLANTIS. In addition to the overhaul WHOI has been funded by the federal agencies to upgrade navigation, imaging and operational equipment. DESSC is continuing to work with WHOI-DSF to upgrade the capabilities and data products of the vehicles, and to work on a policy and plan for archiving data from all of the DSF vehicles. Last Fall, DESSC asked WHOI review its management and operations policies and at the December DESSC meeting they presented an Integrated Deep Submergence Plan that outlined the integrations of ALVIN and ROV programs and provided for shore based and shipboard operations that accommodates various operational scenarios. The plan also addressed management communications within DSOG and with PI's planning to utilize DSOG facilities.

In June, ALVIN engineering dives and recertification took place off Bermuda. ATLANTIS/ALVIN then completed two successful dive programs on the Mid-Atlantic Ridge; one that included filming by the British Broadcasting Corp and another that was in cooperation with U.K. BRIDGE scientists. ATLANTIS has also completed work off the California coast and

is now on the Juan de Fuca Ridge completing several deep submergence research programs that were in serious jeopardy of being delayed for a year because of mechanical problems with R/V THOMPSON's Z-drive. The remainder of the year will see ALVIN/ATLANTIS on the northern EPR before ATLANTIS must undergo a NAVY Post Availability Shakedown (PSA) inspection in San Diego that will last until approximately April 1998. Jason, Argo-II and the DSL-120 sonar are working well and ready to be used on ATLANTIS and other UNOLS platforms in the coming year. DESSC and WHOI are working on methods to educate the community about Jason capabilities and the optimal operational approach for deep submergence field programs using the full suite of DSF vehicles. DESSC, UNOLS and WHOI have developed an on-line "UNOLS/National Deep Submergence Facility Vehicle Request Form - DSV ALVIN, ROV Jason, Argo-II, DSL-120 Sonar", that can now be accessed on the World Wide Web through the Deep Submergence Operations Group at WHOI and the DESSC homepage.

Scheduling problems have plagued us for the past few months and were hopefully resolved at this week's scheduling meeting. Deep submergence facilities scheduling problems were compounded by the fact that ALVIN was in overhaul and many scientists have been waiting for more than a year to use ATLANTIS, and by the addition of unscheduled programs on the Juan de Fuca Ridge. There is so much funded science in diverse field areas, that arranging a schedule that meets all of the PI's needs/schedules/desires, funding agencies priorities and fiscal constraints, as well as the requirements for the Navy inspection in early 1998, has been complex; requiring extensive communication and coordination between all parties. DESSC has worked to facilitate communication and spent a significant portion of the July 16-18 DESSC meeting working together with funding agency representatives and the facility operator to achieve a workable schedule for 1998. The scheduling procedure is becoming more complicated with many more time-series programs being funded, the ability to use the ROV and tethered vehicles in different areas on other large UNOLS ships, and our new global approach to deep submergence science. DESSC will continue to advocate for increased facilities support for the excellent scientific programs that are being funded.

At last years UNOLS meeting, ONR asked DESSC for input regarding the effective utilization of the SEACLIFF and the facility needs of the US academic, deep submergence community. A preliminary response to these issues was provided to ONR in December 1996, and a specially convened Working Group met in March, 1997 to deliberate on these issues. The SEACLIFF Working Group completed a report that summarizes the responses by scientists who filled out a DESSC questionnaire regarding the future of deep submergence science. This report provides ONR with recommendations pertaining to specific options regarding the disposition of Navy assets. The full report can be obtained from the DESSC web site. The SEACLIFF Working Group and DESSC strongly recommended that ONR fund an engineering study to be carried out by WHOI so that well-constrained estimates of costs for the effective utilization of SEACLIFF for academic science can been made within the next 12-18 months.

The federal funding agencies also recently asked DESSC for input regarding interest in the academic community for using the Navy's ATV (Advanced Tethered Vehicle) that will be retired in 1998. DESSC sent a memo to the agencies stating that there is community interest in ATV, and supported a meeting (held on Tuesday) at NSF to discuss the operational capabilities of ATV.

DESSC plans to focus on topics associated with future (10-20 year) facility needs (submersible, ROV, AUV) for deep submergence science, science justifications for the facilities, and the potential fiscal impacts of various options for providing adequate deep submergence facilities that would serve academic research and possible strategic needs into the future.

Submitted by Mike Perfit

Research Vessel Technical Enhancement Committee:

Since the last Council meeting in Grand Haven progress has been made toward the RVTEC Annual meeting scheduled for October 27 through 29 in Seattle. A meeting room has been scheduled on the University of Washington campus and rooms have been blocked for participants at the Meany Tower close by. The meeting is being hosted by Neil Bogue from University of Washington with assistance from Mike Webb from NOAA PMC.

The major presentation will be made by Mr. Bill Riffe, president of Marine Environmental Research, and will be on the subject of Marine Corrosion and its impact on shipboard systems and overboard instruments. Arrangements are also being made with Sea-Bird Corporation for a plant tour and evening presentation at their facility. Sea-Bird is a major supplier of instrumentation used on board UNOLS vessels.

Other agenda items will include discussion of continuing efforts toward updating the salary survey for technicians originally conducted in about 1988 by Bill Coste, a report from the cable subcommittee headed by Don Moller of WHOI and report from the data standards sub-committee headed by Steve Poulos from University of Hawaii.

The RVTEC chair will be attending the JOI SeaNet workshop in Washington on 29-30 September and participation by SeaNet principals is expected at the RVTEC meeting in Seattle.

Respectfully submitted,
John S. Freitag

Arctic Icebreaker Coordinating Committee:

Report from the UNOLS Arctic Icebreaker Coordinating Committee to the UNOLS Council - September 1997

The UNOLS Arctic Icebreaker Coordinating Committee (AICC) provides scientific oversight of Arctic polar science support on US surface vessels, with primary focus on USCGC Polar Star, USCGC Polar Sea, and the new USCGC HEALY. The AICC consists of eight members from the US academic community, and is supported by NSF and the US Coast Guard. We try to maintain ties to other agencies and organizations concerned with marine research in the Arctic.

While there has been little new business since the last report in June 1997, the following updates the last AICC report:

With regards to ship scheduling, we have recommended that the Coast Guard take advantage of the on-line system provided by the UNOLS Office. To that end, the AICC has moved towards scheduling the USCG Arctic science missions within the UNOLS framework and the icebreakers are now on the UNOLS on-line ship-time request site. The AICC would like to see seamless incorporation of the icebreakers into the UNOLS scheduling, notification, and tracking system. Having said that, there will be only limited opportunities for scheduled USCG Arctic science missions (i.e. other than ship-of-opportunity) until January 2000 when USCGC HEALY becomes available.

Presently, the dominant mode of operation for USCG Arctic science support is via the ship-of-opportunity (SOO) cruises. These cruises receive no agency cost recovery because their primary mission is to test the vessel(s) and to act as training missions for the USCG. The AICC has been tasked with the responsibility of coordinating science participation in the SOO cruises. Although the 1997 Arctic SOO program was canceled, we feel that the AICC coordination of the science plan went well. All requests were more or less feasible and we were able to put like-minded groups in contact with one another so that they could maximize their planned science programs. Each 1997 group will be contacted to see if they wish to participate in the planned 1998 SOO cruise. Since there were a number of questions and concerns from the community regarding the AICC's role in SOO cruise planning, we have reformulated SOO guidelines for 1998 and have posted them on the UNOLS web site. We will also publicize them via electronic mailing lists and notices at appropriate national meetings.

SOO cruises exploit a gray area in science support, which has inevitably lead to some problems. Because such cruises are seen by some as fiscally advantageous to funding agencies, and may even be seen by some program managers as a preferred means of data acquisition support, we would like to note that SOO cruises carry considerable risks. Since there is no USCG commitment to science support for SOO cruises, when schedule changes materialize, there has been considerable disappointment on the part of investigators and their program managers, and as a result, image problems for the USCG. We note that true dedicated science missions will put the responsibility for ship support squarely upon the USCG. Such missions will test the USCG commitment to science missions and its readiness for science support operations.

The AICC has recommended that the planned field testing of USCGC HEALY in 1999 not be considered an SOO. We asked the USCG to concentrate on tests and training without being constrained by accomplishing "good science" on its maiden voyage at the expense of fully testing all systems. UNOLS is assisting the Coast Guard with identification of science groups to assist with and monitor the science systems tests. The AICC feels it is very important that procedures be worked out to provide "corporate memory" for science systems support. During HEALY construction, John Boaz, a senior technician at SIO, has been contracted by the USCG (through NSF) for consultation on science systems. In the long-term, because of the nature of USCG assignment rotation, the AICC felt it best to have some form of civilian science support. This topic continues to be under discussion.

One issue of concern to the AICC - scientific clearance in foreign EEZs - has been largely laid to rest. The final step of having the Coast Guard play the same role as a UNOLS operator will probably be adopted following additional consultations between the Coast Guard and the UNOLS Office. AICC questions regarding HEALY's status under Canadian regulations appear to have been resolved satisfactorily.

The AICC continues to build liaisons, for example with RVTEC and the Antarctic Research Vessel Oversight Committee while the AICC e-mail list continues to expand. Progress on USCGC HEALY and work of the AICC was presented to the Arctic Research Commission at their meeting in Barrow, Alaska in August.

At present, USCGC HEALY brings no new dedicated ship/science funds from the federal funding agencies. The AICC hopes that via publicity of the new ship's capabilities and the ease of submitting shiptime requests through the UNOLS ship scheduling process, planned use of USCGC HEALY will generate the number and type of cutting edge proposals envisioned by planners. We feel that availability of HEALY on the UNOLS on-line request system is a first step in developing the proposal pressure that can help engender commitment of new science funds.

With respect to HEALY construction, progress has been good and launch is expected in late 1997. In exchange for a six-month delivery delay, the shipyard agreed to complete most of the "top 10" science-related modifications requested by the AICC. We regard this as a strongly positive move which will greatly benefit science support. Delivery is set for December 1998 with most of 1999 planned as shakedown and testing. We plan to tour HEALY at our next scheduled meeting in New Orleans, tentatively planned for January or February 1998.

APPENDIX IV

SHIP/CLASS	1995	1996	1997	1998	
ATLANTIS	319	93	185	272	
EWING	310	315	273	91	
KNORR	350	279	293	257	
MELVILLE	297	297	308	179	
R. REVELLE		80	287	280	
T.G. THOMPSON	333	246	260	290	
CLASS I/II	1609	1310	1606	1369	
AVERAGE	268	218	268	228	
EDWIN LINK	175	186	212	238	
ENDEAVOR	228	147	201	199	**
GYRE	122	219	148	18	
MOANA WAVE	195	144	203	185	
NEW HORIZON	240	174	262	180	
OCEANUS	187	168	201	199	
SEWARD JOHNSON	271	304	290	233	
WECOMA	145	198	200	217	
CLASS III	1563	1540	1717	1469	
AVERAGE	195	193	215	184	
ALPHA HELIX	144	73	120	180	
CAPE HATTERAS	175		230	242	
CAPE HENLOPEN	198	185	206	188	
LONGHORN	72	130	53	40	
PELICAN	182	201	211	192	
POINT SUR	164	118	197	195	
R. SPROUL	180	132	88	75	
SEA DIVER	145	155	185	168	
WEATHERBIRD II	154	167	150	154	
CLASS IV	1414	1161	1440	1434	
AVERAGE	157	145	160	159	
BARNES	77	86	133	100	
BLUE FIN (b)	75	96	105	146	
CALANUS	48	50	115	140	
LAURENTIAN	91	72	44	146	
URRACA				173	
< CLASS IV	291	304	397	705	
AVERAGE	58	61	79	141	
Fleet Total	4877	4315	5160	4977	
Average	174	154	184	178	
Fleet Total without	4586	4011	4763	4272	
<Class IV					
**ENDEAVOR or OCEANUS will not operate					

UNOLS FLEET CHARGE DAYS

(by Agency & Year)

		1995	1996	1997	1998
NSF	Days	3249	2738	2965	2848
	%	66.6	63.5	58.0	57.7
ONR	Days	403	454	511	386
	%	8.3	10.5	10.0	7.8
NOAA	Days	354	145	366	330
	%	7.3	3.4	7.2	6.7
NAVO	Days	0	0	398	478
	%	0	0	7.8	9.7
OTHER	Days	872	978	872	891
	%	17.9	22.6	17.1	18.1
TOTAL	Days	4877	4315	5112	4933

9/15/97 - DAM

APPENDIX V

SUMMARY OF SHIP USE AND COSTS

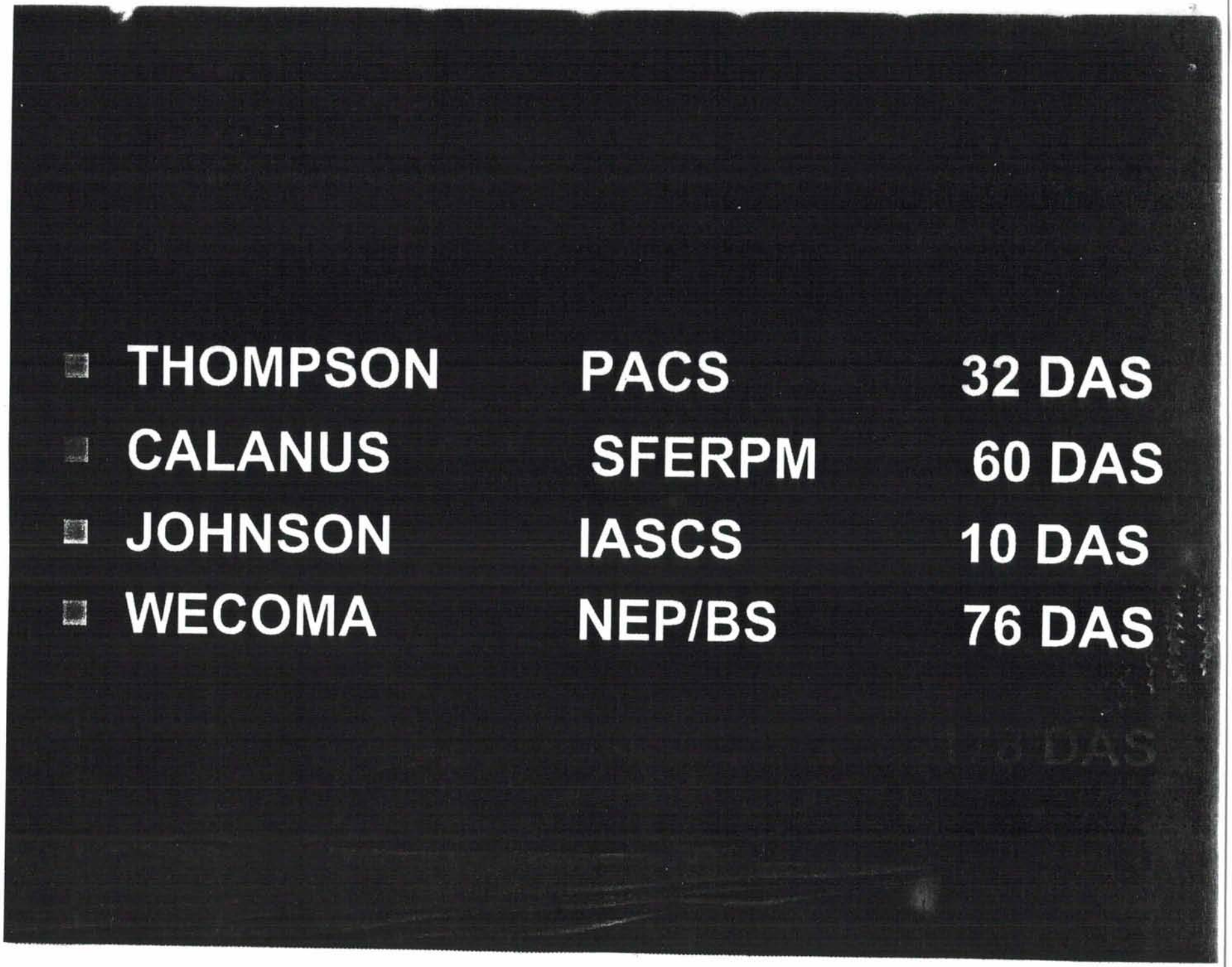
YEAR 1,998

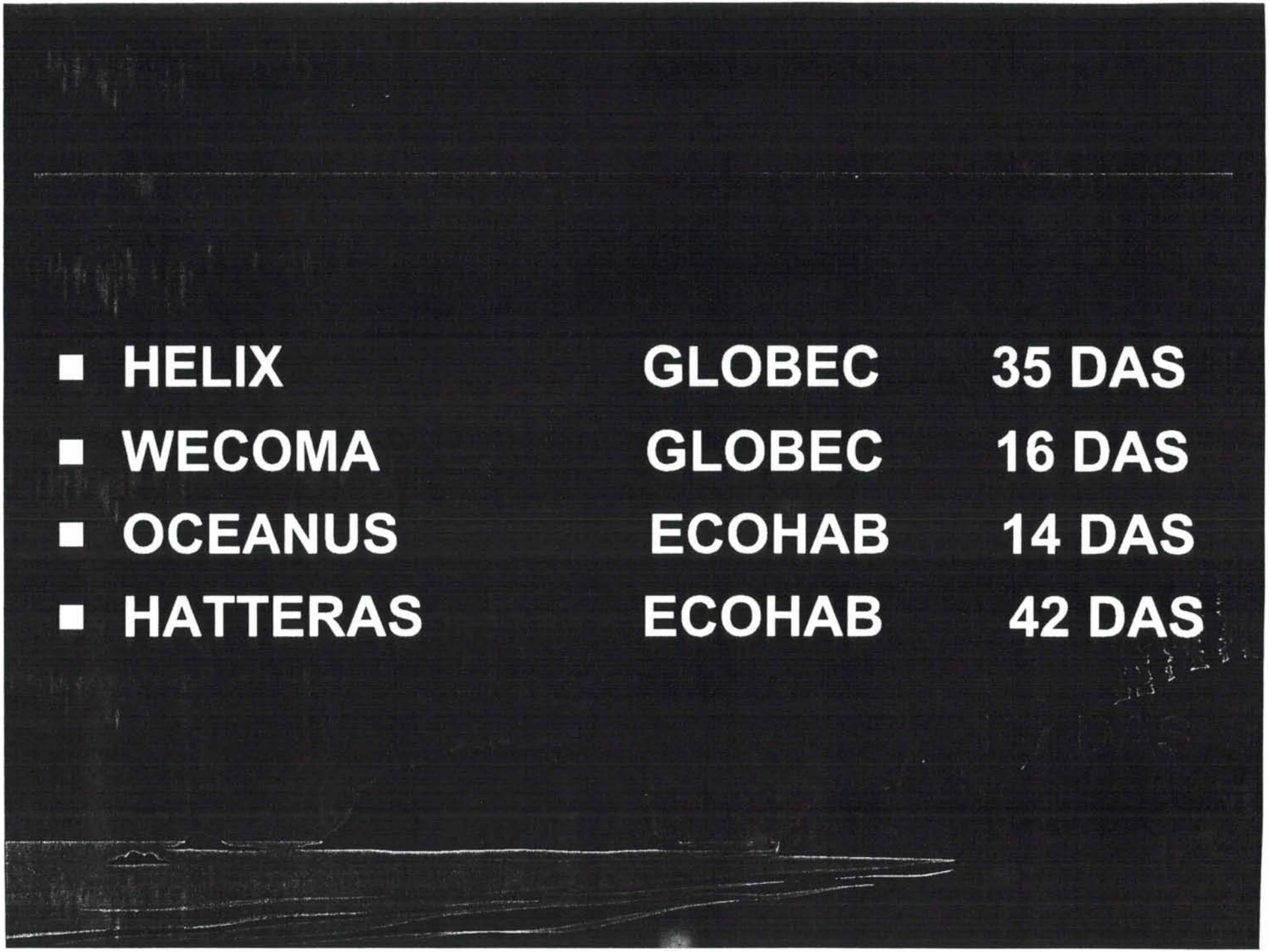
As of: 9/12/97

	NSF		NAVY		OTHER		TOTAL		DAILY
SHIP/CLASS	DAY	$	DAY	$	DAY	$	DAY	$	RATE
R. REVELLE	127	2,121	135	2,255	18	301	280	4,677	16,704
MELVILLE	172	3,044	0	0	7	124	179	3,168	17,698
KNORR	185	3,034	53	869	19	312	257	4,215	16,400
ATLANTIS	223	3,524	11	174	38	600	272	4,298	15,801
EWING	73	1,278	48	840	18	315	139	2,432	17,496
T.G. THOMPSON	112	1,773	76	1,203	1,615	4,591	290	4,591	15,831
MOANA WAVE	104	1,452	16	224	65	907	185	2,583	13,962
CLASS I/II	996	16,226	339	5,565	1,780	7,150	1,602	25,964	- -
AVE: (7)	142	2,318	48	795	254	1,021	229	3,709	- -
EDWIN LINK	29	261	0	0.0	209	1,881.0	238	2,142	9,000
ENDEAVOR	0		0		0		0	0	0
OCEANUS	152	1,611	40	424	7	74	199	2,109	10,600
GYRE							0	0	0
NEW HORIZON	77	754	97	950	37	362	211	2,066	9,791
SEWARD JOHNSON	173	1,678	34	330	26	252	233	2,260	9,700
WECOMA	71	703	58	574	86	851	215	2,128	9,898
CLASS III	502	5,007	229	2,278	365	3,420	1,096	10,705	- -
AVE: (8)	63	626	29	285	46	428	137	1,338	- -
PELICAN	62	233	25	94	105	394	192	721	3,755
LONGHORN	54	216	0	0	30	120	84	336	4,000
POINT SUR	121	762	28	176	46	290	195	1,228	6,297
CAPE HATTERAS	104	724	81	564	57	397	242	1685	6,963
ALPHA HELIX	132	1,417	0	0	12	129	144	1546	10,736
R. SPROUL	81	482	44	262	20	119	145	863	5,952
CAPE HENLOPEN	104	593	68	388	16	91	188	1,072	5,702
WEATHERBIRD II	139	1,043	0	0	0	0	139	1,043	7,504
SEA DIVER	18	86	22	105	45	214	85	405	4,761
CLASS IV - TOTAL	815	5,556	268	1,589	331	1,754	1,414	8,899	- -
AVE: (9)	91	617	30	177	37	195	157	989	- -
BLUE FIN (b)							0	0	1,816
LAURENTIAN	140	630	0	0	6	27	146	657	4,500
BARNES	65	99	17	26	18	27	100	152	1,520
CALANUS	80	248	0	0	60	186	140	434	0
URRACA							0	0	0
< CLASS IV TOTAL	285	977	17	26	84	240	386	1,243	- -
AVE: (5)	57	195	3	5	17	48	77	249	- -
Fleet Total	2,598	27,766	853	9,458	2,560	12,564	4,498	46,811	- -
AVE: (29)	90	957	29	326	88	433	155	1,614	- -

APPENDIX VI

1998


THOMPSON PACS 32 DAS
CALANUS SFERPM 60 DAS
JOHNSON IASCS 10 DAS
WECOMA NEP/BS 76 DAS


HELIX GLOBEC 35 DAS
WECOMA GLOBEC 16 DAS
OCEANUS ECOHAB 14 DAS
HATTERAS ECOHAB 42 DAS

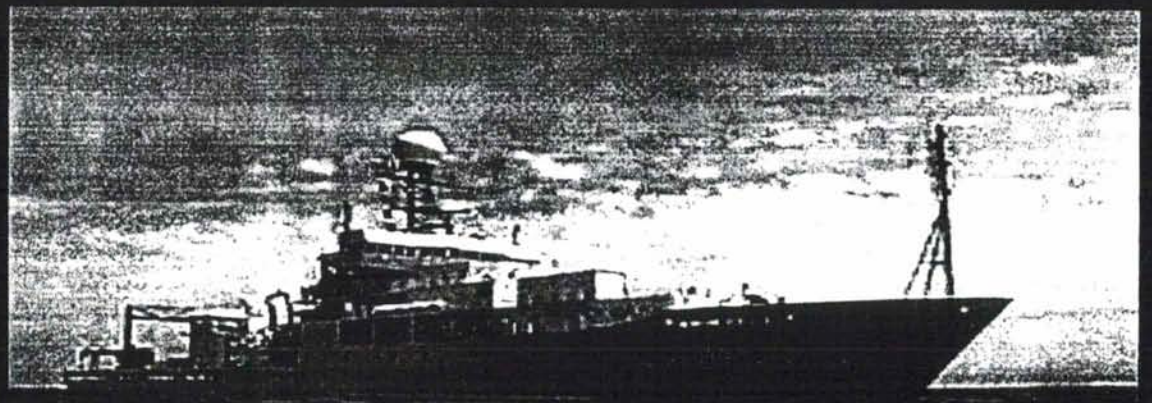
FIRST CRUISE - FACS (7/2 - 9/8)

Fuel Oil Cooler Failure

P-3 Air Drop

Medevac

DRIPS



A-76 Study

PWS	9/5
MES	9/5
Issue Solicitation	9/23
ICHE	12/8
Cost Comparison	12/10 - 1/14
Notify Parties and Appeals	1/14 - 2/26
Notice to Commence	5/7/98

We're still here!

S. 877 Introduced

APPENDIX VII

NSF Report
UNOLS Council and Annual Meeting
September 1997

Staff Changes

- Lisa Rom has returned to NSF as Assistant Program Director for the Oceanographic Technology and Interdisciplinary Coordination (OTIC) program.

- Sandy Shor will continue as Program Director for Instrumentation and Technical Services (ITS) for the rest of the year.

- Recruitment of a permanent Program Director for the program will be initiated shortly.

NSF Report
UNOLS Council and Annual Meeting
September 1997

FY 1998 Budget

- House and Senate conference to resolve budget differences expected this week.

- FY 1998 budget request for Ocean Sciences is $206.2M, or a 2.1% increase over FY1997.

- Ocean Sciences Centers and Facilities request is $52.3M, the same as FY1997.

Stay tuned.

NSF Report
UNOLS Council and Annual Meeting
September 1997

Fleet Planning and Operations

- More than one ship is expected to be out of service for all or most of CY 1998 operations.
- Specific decisions are being made following the Ship Scheduling meeting this week and consultations with operating institutions, science program managers, and other agencies.
- Additional or continuing lay-ups are anticipated for CY 1999 operations unless additional research projects requiring the use of UNOLS ships are sponsored by agencies other than NSF. NSF does not anticipate major changes in number or research vessels required to support NSF-sponsored projects in the near future.

NSF Report
UNOLS Council and Annual Meeting
September 1997

Year of the Ocean (YOTO)

- The UN has designated 1998 as YOTO.
- "World Fair" in Lisbon, Portugal
- Much preliminary activity, few funds
- NSF Ocean Sciences will participate
  - Mike Reeve, Head of research section is "official" coordinator
- Expect to encourage "outreach" activities related to NSF-sponsored research cruises. Specific plans will depend on FY 1998 appropriation still pending in Congress.

GPRA
(Government Performance and Results Act)
NSF Implementation: Facilities

Required GPRA Documents

- Agency Strategic Plan - updated every 3 years.
- Annual Performance Plan - must contain measurable performance goals.
- Annual Performance Report - identifies achievements and compares actual performance to stated goals.

GPRA
(Government Performance and Results Act)
NSF Implementation: Facilities

NSF Strategic Plan

- Update underway for FY1999 and beyond.
- Integrated portfolio of investments in key functions
  - Research project support
  - Research facilities
  - Education and training
  - Administration and Management

GPRA
(Government Performance and Results Act)
NSF Implementation: Facilities

NSF Performance Plan

- Under Development
- Major themes/outcome goals
  - Discoveries at and across the frontier of science and technology
  - Connections between discoveries and their use in service to society
  - A diverse, globally-oriented Workforce of scientists and engineers

GPRA
(Government Performance and Results Act)
NSF Implementation: Facilities

Facilities included, e.g., academic research fleet

- contributes to Discovery by enabling world-class research in geosciences
- facilitates Connections by disseminating information through international and interagency partnerships.
- enhances the scientific Workforce through providing research experience to graduate and postdoctoral students.

GPRA
(Government Performance and Results Act)
NSF Implementation: Facilities

- Facilities goals also focus on efficient, effective operation of multi-user facilities.
  - Construction and upgrades on schedule
  - Construction and upgrades within budget
  - Fraction of user use lost due to breakdown low
  - Demand for facility use for first rate science and engineering exceeds capacity.
- Specific measures to be determined.

GPRA
(Government Performance and Results Act)
NSF Implementation: Facilities

NSF Performance Report

- Under development
- Pilot report in FY 1998 for FY 1996 activities
- UNOLS provided data for academic fleet
  - Thank you Annette!
- Will be continuing requirement for annual reports from major multi-user facilities.
  - Academic Research Fleet
  - Ocean Drilling Program Operations
  - Accelerator Mass Spectrometry center
- Ocean Sciences expects to request annual repo[illegible] academic research fleet from UNOLS Office, no[illegible] individual operators.

GPRA
(Government Performance and Results Act)
NSF Implementation: Facilities

NSF Committee of Visitors (COV) will review every three years.

- Pilot review this year.
- Have copy of UNOLS report for 1996.

Stay tuned!

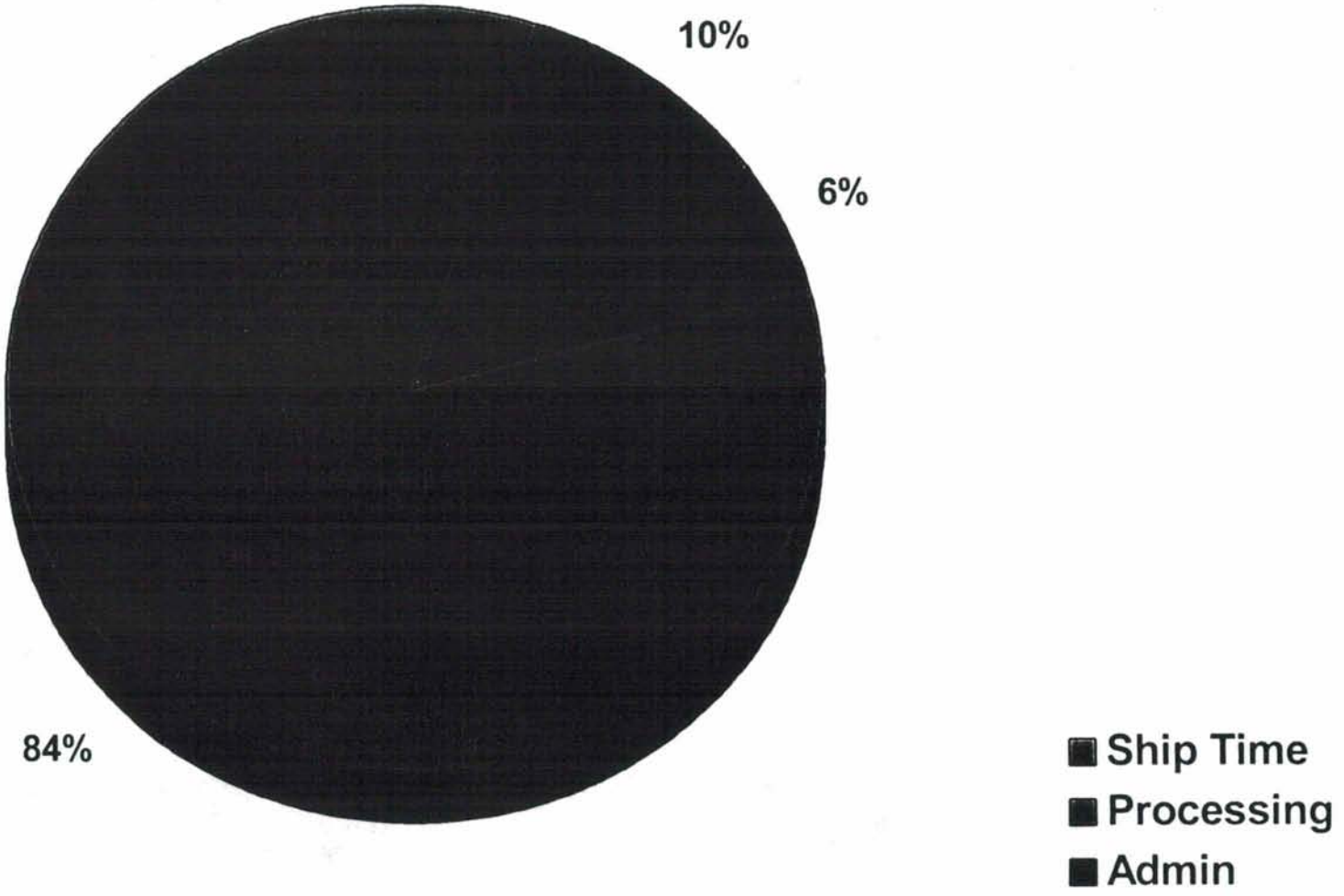
- Draft documents exist but specific measures and goals are still being negotiated.
- Will be public documents prior to submission of FY 1999 budget to Congress (Jan/Feb 1998).

APPENDIX VIII

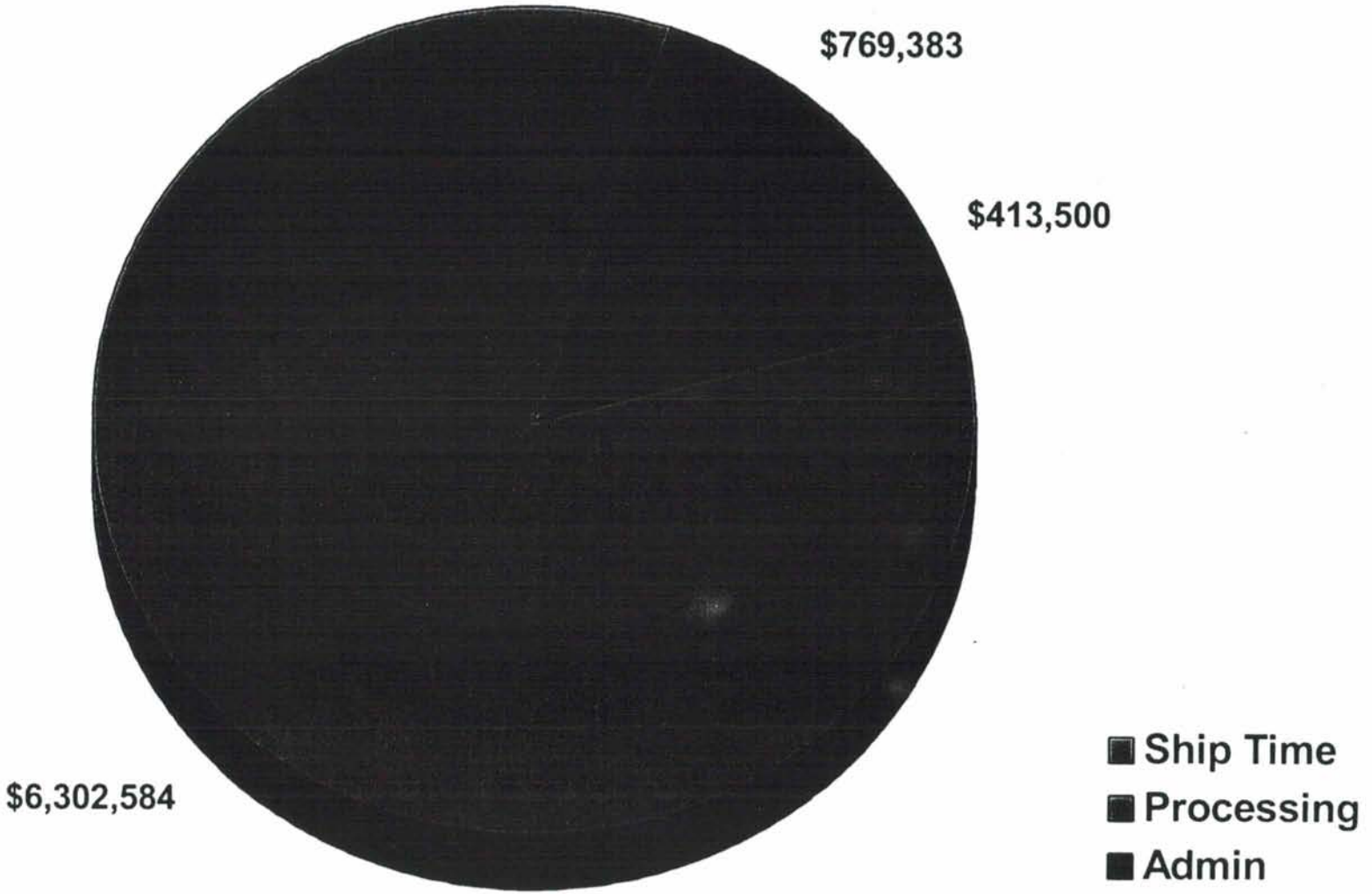
First year Partnership success

- **1.6 Ship years performed (432 days)**
  - Contrasted to normal USNS optempo for NAVO
  - Processing was included--alleviated potential NAVO backlog
- **#1 requirement of 2 FLEET Commanders satisfied**
  - Likely to have been further deferred without UNOLS
  - Ensured earlier forward deployment of 2 TAGS-60's
- **Allowed earlier test and evaluation of 2 important sensor upgrades**
  - Tactically significant data and FLEET requirements accomplished

97 UNOLS/NAVO Planned Operations



97 UNOLS/NAVO Planned Operations



APPENDIX IX

TELEPHONE
(703) 528-1775
FAX (703) 528-2333

NAVY LEAGUE OF THE UNITED STATES

Serving the Sea Services since 1902

2300 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22201

JACK M. KENNEDY
NATIONAL PRESIDENT

Dear Students and Teachers:

On behalf of the Navy League of the United States, I am pleased to invite you to participate in the **"Name This Ship"** contest to choose the name for the U.S. Navy's newest oceanographic survey ship (T-AGS 64). As an educational non-profit organization established almost one hundred years ago with the help of President Theodore Roosevelt, the Navy League is proud to provide this poster and play a key role in this historic event.

The United Nations has declared 1998 as the **Year of the Oceans**. The Navy League, in partnership with many other national organizations such as the Navy, Coast Guard, the Maritime Administration, NOAA, NASA, and the Department of Education, is working to ensure that all Americans, especially young people, learn more about this delicate and crucial element of the global ecosystem. By entering this competition, you will learn about things like weather and climate, oceanography, geography, history and more!

As we approach the 21st Century, it is very important that the United States shoulders its responsibility as a world leader and a maritime nation. A vital component of our leadership role is to help advance scientific discovery with respect to the world's oceans. Expanded understanding of the complex interactions between the sea, air and land is critical if we are to ensure the long-term good health of our environment.

I am very excited about the fact that using the Internet is key to participating in this contest. In order to get the most up-to-date information about the contest, please visit our website at http://www.navyleague.org, or go to our partners in this contest, the Oceanographer of the Navy (http://oceanographer.navy.mil), the National Geographic Society (http://www.nationalgeographic.com) and the Navy Memorial (http://www.lonesailor.org).

Be a part of history and form your team to Name This Ship today! I look forward to seeing you in Washington, DC!

Sincerely,

Jack M. Kennedy
National President

Navy League of the United States

"Serving since 1902 to educate the American people and support the men and women of the sea services."

Youth Programs

The **Naval Sea Cadet Corps** (NSCC) is a federally chartered non-profit civilian youth training organization for young people aged 13 - 17. Sponsored by the Navy League, NSCC is supported by the Navy and the Coast Guard. Over 8,800 cadets were enrolled in 1996 nationwide, and over 5,700 cadets participated in various summer training programs including working with Navy SEALs, Coast Guard Search and Rescue teams, and even learning how to fly airplanes!

The **Navy League Cadet Corps** (NLCC) is a youth program designed for boys and girls aged 11 - 13 sponsored and supported by the Navy League. This exciting educational and training program was established to provide younger Americans with an opportunity to learn more about our nation's proud maritime heritage through training, education and hands-on instruction.

The Navy League awards **Scholarships** and also conducts an annual **Essay Contest**. Navy League National Headquarters and local Councils awarded over $100,000 in scholarships and awards over the 1996/1997 school year to deserving students all over the country.

To learn more about the Navy League of the United States and its Youth Programs, call us at (800) 356-5760, or visit our website at http://www.navyleague.org.

U.S. Navy Ship Naming Contest (T-AGS 64)

Eligibility

All students in grades kindergarten (K) through 12th grade are eligible to participate in the Navy's Oceanographic Ship Naming Competition. Qualifying schools include all public and private schools in the 50 states and the District of Columbia, the US territories including American Samoa, Guam, Puerto Rico, the Northern Mariana Islands, and the US Virgin Islands, as well as all Bureau of Indian Affairs schools, the Department of Defense Dependents Schools, and Department of State overseas schools. Schools, including Home Schools, must be state-recognized and in compliance with federal and state civil rights and nondiscrimination statutes.

Rules

1. For the purpose of this competition, there will be two divisions: Division 1 will include students from K through grade 6. Division 2 will include students in grades 7 through 12.

2. Students will research one name and work on a project to support that name. They must form and work in teams of no fewer than four students. There is no maximum number of students per team. Teams can be comprised of students from more than one grade, but in the case of a team including students eligible for each division, the division of entry will be the one for which 75% of the members are eligible. An individual student may only be a member of one team.

3. Each team will work on an educational project to support and justify their proposed ship name and to help fellow students learn about the Navy and its ocean-related research and survey work and the maritime sciences in general. The project must be approved by the Team Coordinator (see below). These projects will be judged on their interdisciplinary nature (incorporating a variety of academic disciplines), imagination and creativity, and evidence of educational value. Projects can produce studies, models, experiments, time charts, and historical comparisons, as well as creative expressions in writing, song, artwork and film. Project ideas will be limited only by the team's imagination.

4. Each team must have one Team Coordinator who must be a member of a school faculty. The Team Coordinator will be responsible for oversight of the team's work and submission the Ship Naming Entry Proposal to the Navy League of the United States state or regional president for the state in which the team resides. A Team Coordinator may serve more than one team. Student teams are encouraged to petition school faculty members to serve as their Team Coordinator and to draw upon parents and other community resources for help in working on their projects.

5. Cost of participation in this program ought to be minimal for participating students, faculty, schools and others. No funds can be provided by the Navy or the Navy League of the United States for participation in this program.

Name Criteria

Proposed ship names may be, but are not limited to, the names of former vessels used in exploration, discovery, science, research, experimentation or adventure. They can be names of former vessels remembered for their achievement and derring-do on the oceans and seas in the pursuit of freedom and/or scientific excellence. They may be names of men and women whose work or achievements linked them to the oceans (ships cannot be named for people currently living). The names may also be simply those that capture the spirit of ships and seafaring. All names must be appropriate for American Navy ships.

For the purposes of this program, all names used for Navy oceanographic ships in the last 25 years and names currently in use for other US Navy ships will not be considered. A listing of the current Navy ships can be found in the Navy's Public Affairs Library at **http://www.navy.mil** on the World Wide Web. Be sure to select the "Status of the Navy" icon. A complete listing of US academic oceanographic ships can be found on **http://www.cms.udel.edu/ships/index.html**.

Timeline and Entry Procedures

1. Students' projects must be worked on starting in September, 1997, and completed by December, 1997.

2. Team Coordinators will submit each team's Proposal and Project Outline to the Navy League state or regional president. ***Entries must be postmarked no later than December 31, 1997.*** Although the Navy has emphasized the use of new technologies in the program, we understand that not all students may have access to the internet or electronic mail. Therefore, *all* entry proposals will be submitted in paper form so that all students can be accommodated. Each team's Entry Proposal packet will be comprised of the following:

A Cover Page listing in this order:
- Proposed Ship Name
- Division Entry (1 or 2)
- Name of Team Coordinator
- Team Coordinator's title or position
- Address of School
- Telephone Number of School (or Team Coordinator)

A second page listing the name of each team member, his or her age and grade in school, and the name of the school each member attends.

Also included will be a student-written, persuasive one-page essay on the ship name proposed, why it is appropriate for a US Navy vessel, and how the name captures the spirit of the US Navy's oceanographic survey mission and how it fits within the previously mentioned criteria. Students may attach, if they wish, a bibliography or list of resources used to research and justify their proposed ship name.

Each Proposal will also include a student-written, two-page summary description of the Team Project explaining how this project showed team effort, was interdisciplinary, innovative and met the educational goals of this program. If appropriate, photos or sketches may be attached to no more than three accompanying pages.

IMPORTANT NOTE: All materials must fit in a single 9" x 12" envelope. Videotapes, audiotapes, models, CDS and other materials that might be produced as part of a team project cannot be forwarded as part of the Entry Packet. ***Proposals that do not follow all rules will not be considered.***

Receipt of each entry will be acknowledged by the Navy League state or regional president in the form of a letter. An awards panel will be convened by each Navy League state or regional president, and winners from each division will be forwarded to Washington, DC, no later than March 15, 1998, where a panel convened by the Oceanographer of the Navy and Navy League National Headquarters will determine the top ten winning entries from both divisions. Final divisional winners will be determined from this group.

4. In May, 1998, a representative group from each of the two divisional winning teams will receive an all-expenses-paid trip to Washington, DC to meet with top Navy officials and to attend the award reception and presentation. The Secretary of the Navy will announce at that time the grand winner for the best name for T-AGS 64. Representatives from the grand winning team will also receive an invitation to attend the christening and launch of the newly named ship later in the year.

Media Contacts

Office of the Navy Chief of Information
Lieutenant Rick Haupt, (703) 697-5342

Office of the Oceanographer of the Navy
Ms. Gail S. Cleere, (202) 762-1045
Mr. Patrick J. Dennis, (202) 762-0253

Be a part of history and enter the Name This Ship Competition! Help choose the name for the U.S. Navy's newest oceanographic survey ship to be launched in 1998. Students in grades K through 12 are invited to participate and win!

A special full-color poster with detailed information is enclosed. The competition begins in September, 1997, so open and display this poster today!

For up-to-the-minute information, please visit
http://oceanographer.navy.mil!

Office of the Oceanographer of the Navy
34th and Massachusetts Avenue, NW
Washington, DC 20392-5421

APPENDIX X

9/10/97

CBD ANNOUNCEMENT FOR OPERATOR SELECTION

Office of Naval Research, 800 N. Quincy St., Arlington, VA 22217-5660

OPERATION OF ONE OCEANOGRAPHIC RESEARCH VESSEL:

The ship will be constructed as a general purpose oceanographic research vessel, the AGOR 26. To be eligible to operate the vessel, the offeror must be a member of the University National Oceanographic Laboratory System (UNOLS) or meet the requirements and agree to apply for full membership if selected. In order to maintain the nation's oceanographic fleet at the optimum size, a current CLASS I or CLASS II UNOLS vessel must be retired or otherwise removed from service by the date the AGOR 26 commences operations. Thus, to be eligible for award, the offeror must be able to exchange or retire a CLASS I or CLASS II UNOLS oceanographic research vessel. In addition, the successful offeror is expected to (1) provide institution funds annually to defray part of the cost of ship operations; (2) provide technical assistance during the period covering design development through builder selection and vessel delivery; (3) enter into a renewable charter party agreement with the Navy; (4) maintain and operate the ship under sound maritime practices; (5) complete final outfitting of the vessel; (6) undertake a cooperative role in scheduling and operating the ship in the support of Navy research programs and the larger U.S. ocean science research community. Interested parties should request the RFP by 17 October 1997 to be considered further. Send written requests for the RFP to the above address, to the attention of Code 321RF.

•OPERATOR SELECTION

CBD issued - 15 September 1997

Must request RFP by 17 October 1997

Proposal due by 5 Dec 1997

Expect decision in January 1998

•FUNDING

CNR requested use of 804 process (Feb 97)

Supported by NAVSEA 00, N096, ASN(RD&A), SECNAV

Need to resolve use of process with SCN funds

Exploring conversion of SCN to R&D (under Navsea)

•SHIP DESIGN & CONSTRUCTION

If SCN, refinement of requirements, similar to AGOR process

If R&D/804 process, development of performance needs

Inclusion of operator, ship design, and shipyard.

If R&D (FY 97 $$), the funds must be obligated before Oct 98.

APPENDIX XI

NOPP Program Office Status

- Competitively Awarded to CORE, Jul 1997
- Handover from SCG: in progress
- Two of three additional positions filled
- Virtual Ocean Data Center Workshop
- NORLC Terms of Reference
- ORAP Charter and membership
- Annual Report to Congress

NOPP - Status

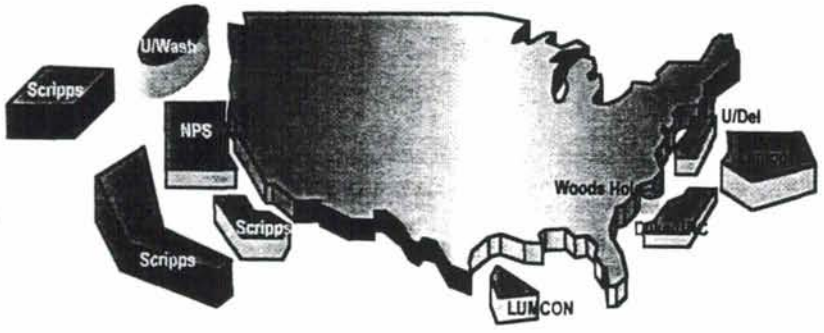
- Congress working on "NOPA 2" - FY98
  - Same fundamental components, plus additional element - Ocean observations ($10M)
  - Navy requested $5M in the FY98 PRESBUDG
  - FY98 Defense Authorization provides Navy additional $16M for NOPP in 6.2 and $7.5M in O&MN for University ships to work on Navy operational surveys
  - NORLC Structure - in resolution
- Linkage to intn'l efforts - Year of the Ocean
- Next BAA: out in October

The National Oceanographic Research Leadership Council

SECNAV	NOAA Admin.
NSF Dir.	NASA Admin.
DEPSEC Energy	EPA Admin.
Coast Guard Comm.	USGS Dir.
MMS Dir.	DARPA Dir.
OSTP Dir.	OMB Dir.

- 7 others (NAS, NAE, IoM, State Gov., Academia, Industry, TBD)--*Maybe.*

1997 NOPP Surveys with **UNOLS** vessels



NOPP - Status

(as of mid-Sept. 1997)

- FY 99 and outyears
  - Ten agencies have indicated interest in supporting the Partnership Program in the outyears
  - Agencies developing budgets (Navy, NSF, NOAA indications)
  - Mechanism for budgeting: *An NORLC Agenda Item at next meeting*

APPENDIX XII

LOS AND THE ACADEMIC RESEARCH SCIENTIST

J. Ashley Roach[1]

U.S. Marine Scientific Research Policy

The LOS Convention solidifies coastal State control over Marine Scientific Research (MSR) in waters subject to their jurisdiction, waters which now encompass considerably more of the globe now than in 1958.[2] Nevertheless, U.S. policy is to encourage freedom of marine scientific research. That policy was fostered by the U.S. decision, first stated in the President's Oceans Policy Statement of March 10, 1983,[3] and reaffirmed in October 1994 in the documents transmitting the LOS Convention to the Senate,[4] to not claim jurisdiction over MSR in its EEZ,

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[1] Captain, JAGC, USN (ret.), Office of the Legal Adviser, U.S. Department of State. This paper is a revised version of a speech delivered at a conference on observing the oceans at the Woods Hole Oceanographic Institution on January 10, 1995.

[2] Accompanying Germany's instrument of accession to the LOS Convention was a declaration concerning marine scientific research, which reads as follows:

> Although the traditional freedom of research suffered a considerable erosion by the Convention, this freedom will remain in force for States, international organizations and private entities in some maritime areas, e.g., the sea-bed beyond the continental shelf and the high seas. However, the exclusive economic zone and the continental shelf, which are of particular interest to marine scientific research, will be subject to a consent regime, a basic element of which is the obligation of the coastal State under article 246, paragraph 3, to grant its consent in normal circumstances. In this regard, promotion and creation of favourable conditions for scientific research, as postulated in the Convention, are general principles governing the application and interpretation of all relevant provisions of the Convention.
>
> The marine scientific research regime on the continental shelf beyond 200 nautical miles denies the coastal State the discretion to withhold consent under article 246, paragraph 5(a), outside areas it has publicly designated in accordance with the prerequisites stipulated in paragraph 6. Relating to the obligation, to disclose information about exploitation or exploratory operations in the process of designation is taken into account in article 246, paragraph 6, which explicitly excluded details from the information to be provided.

Multilateral Treaties Deposited with the Secretary-General: Status as at 31 December 1994, UN Doc. ST/LEG/SER.E/13, at 859 (UN Sales No. E.95.V.5, 1995).

[3] When claiming its EEZ in 1983, the United States chose not to assert the right of jurisdiction over marine scientific research within the zone. President Reagan explain the rationale for not doing so, as follows:

> While international law provides for a right of jurisdiction over marine scientific research within such a zone, the proclamation does not assert this right. I have elected not to do so because of the United States interest in encouraging marine scientific research and avoiding any unnecessary burdens. The United States will nevertheless recognize the right of other coastal states to exercise jurisdiction over marine scientific research within 200 nautical miles of their coasts, if that jurisdiction is exercised in a manner consistent with international law.

President's Ocean Policy Statement, Mar. 10, 1983, I PUBLIC PAPERS OF THE PRESIDENTS: RONALD REAGAN 1983, at 378-79.

[4] Commentary, Sen. Treaty Doc. 103-39, at 80; 6 State Dept. Dispatch Supplement No. 1, Feb. 1995, at 44.

a right provided for under international law reflected in the LOS Convention. The United States declined to assert jurisdiction in its EEZ over MSR because of its interest in encouraging MSR and promoting its maximum freedom while avoiding unnecessary burdens. The Department of State is charged with facilitating access by U.S. scientists to foreign EEZ's under reasonable conditions. Consequently, since 1983 the U.S. requests permission through diplomatic channels for U.S. research vessels to conduct MSR within 200 miles of a State asserting such jurisdiction.[5]

The United States does not claim jurisdiction over fisheries research except when it involves commercial gear or commercial quantities of fish, and even then it may qualify as scientific research. The United States does, however, claim jurisdiction over marine mammal research.[6]

Role of the U.S. State Department in MSR

Within the Bureau of Oceans and International Environmental and Scientific Affairs (OES) is the Office of Ocean Affairs (OA), a division of which is the Marine Science and Technology Affairs Division (OA/MST).

The Marine Science Division is responsible for assuring that U.S. policy is adhered to in acquiring permission from the coastal State, when required for such research, and for coordinating and processing of the request, as well as in processing requests from foreign researchers to conduct MSR in the U.S. territorial sea.

OES is headed by Assistant Secretary Elinor Constable. The Deputy Assistant Secretary for Oceans is Ambassador David Colson (OES/O). The Office of Ocean Affairs is headed by Tucker Scully, and the Director of the Marine Science Division is Bill Erb. Mr. Erb is ably assisted by Mr. Tom Cocke, who is charged with processing all applications to conduct MSR.

Definitions

Coastal State jurisdiction over foreign marine scientific research differs depending on which activity is involved and on the maritime zone in which it is conducted.

The LOS Convention does not define the terms "marine scientific research", "survey activities", "hydrographic survey", or "military survey". However, the concepts are distinct.

MARINE SCIENTIFIC RESEARCH

The United States accepts that "marine scientific research" (MSR) is the general term most often used to describe those activities undertaken in the ocean and coastal waters to expand scientific knowledge of the marine environment and its processes.[7] MSR includes oceanography, marine

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[5] The United Kingdom similarly acts on behalf of British scientists seeking authorization to conduct MSR in foreign waters. 56 Br. Y.B. Int'l L. 1985, at 500.

[6] 16 U.S.C. § 1374(c).

[7] *Accord*, SOONS, MARINE SCIENTIFIC RESEARCH AND THE LAW OF THE SEA 124 (1982) (hereinafter, SOONS).

biology, fisheries research, scientific ocean drilling and coring, geological/geophysical scientific surveying, as well as other activities with a scientific purpose. It is distinguished from hydrographic survey, from military activities, including military surveys, and from prospecting and exploration.[8]

HYDROGRAPHIC SURVEY

The generally accepted modern international interpretation of "hydrographic survey", which is shared by the United States, is to obtain information for the making of navigational charts and safety of navigation. It includes determination of one or more of several classes of data in coastal or relatively shallow areas--depth of water, configuration and nature of the natural bottom, directions and force of currents, heights and times of tides and water stages, and hazards for navigation--for the production of nautical charts and similar products to support safety of navigation, such as Sailing Directions, Light Lists and Tide Manuals for both civil and military use.[9] Coastal, harbor and harbor approach charts and other products are published by the U.S. Defense Mapping Agency and made available to mariners of all nations.[10]

In many areas of the world, the production of up-to-date charts has had a positive impact on economic development in coastal areas, stimulating trade and commerce and the construction or modernization of harbor and port facilities. By helping safety of navigation for ships transiting off-shore, up-to-date charts also play a role in protecting coastal areas from the environmental pollution which results from wrecks of freighters and tankers carrying hazardous cargoes. Data collected during hydrographic surveys may also be of value in coastal zone management and coastal science and engineering.

MILITARY SURVEYS

The United States considers that military surveys refer to activities undertaken in the ocean and coastal waters involving marine data collection (whether or not classified) for military purposes. Military surveys can include oceanographic, marine geological, geophysical, chemical, biological and acoustic data. Equipment used can include fathometers, swath bottom mappers, side scan sonars, bottom grab and coring systems, current meters and profilers. While the means of data collection used in military surveys may sometimes be the same as that used in MSR, information from such activities, regardless of security classification, is intended not for use by the general scientific community, but by the military.[11]

SURVEY ACTIVITIES

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[8] Commentary on LOS Convention, Sen. Treaty Doc. 103-39, at 80; SOONS 125 (MSR differs from hydrographic surveys and resource exploration). In discussing MSR for military purposes, Soons (at 135) does not mention military surveys or other military activities.

[9] *Cf.* IHO Definition 40 [any better cite?]

[10] 10 U.S.C. § 2791 *et seq.*

[11] ROACH & SMITH, EXCESSIVE MARITIME CLAIMS 248, 66 U.S. NAVAL WAR COLLEGE, INTERNATIONAL LAW STUDIES (1994).

This term is used to include hydrographic surveys and military surveys.

MILITARY ACTIVITIES

Military activities include launching and landing of aircraft, operating military devices, intelligence collection, weapons exercises, and military surveys.

Legal Regimes Under the 1958 Geneva Conventions

Prior to the Third UN Law of the Sea Conference, each coastal State possessed sovereignty over a narrow territorial sea and sovereign rights over its continental shelf for the purpose of exploring and exploiting its natural resources. High seas freedoms, including the freedom to conduct MSR and surveys, pertained in the water column seaward of the territorial sea, including over the continental shelf, and of the seabed seaward of the outer limits of exploitability of the continental shelf.

The United States is a party to the four 1958 Geneva Conventions on the Law of the Sea, which established a regime -- of sorts -- for MSR and surveys. The Continental Shelf Convention recognizes coastal State jurisdiction over MSR involving the continental shelf and physically undertaken there, but is silent regarding surveys. The coastal State is normally expected to give its consent if the request is in connection with purely scientific research and is submitted by a qualified institution. The coastal State has the right to participate or be represented in research. The results of the research must be published.[12] The High Seas Convention, expressly codifying customary international law, recognizes the freedom of the seas, including the water column over the continental shelf, without specifically mentioning MSR or surveys as one of those freedoms among the illustrative list of freedoms.[13] Nevertheless, the conduct of MSR is regarded as a exercise of the freedom of the high seas.[14] The Convention on the Territorial Sea and the Contiguous Zone is silent on MSR and surveys, except to provide that the territorial sea and subjacent seabed and subsoil are under the sovereignty of the coastal State.[15] If follows that the consent of the coastal State must be obtained for research work in its territorial sea.[16] The Fishing Convention[17] is silent on marine scientific research. Thus, the

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[12] 1958 Convention on the Continental Shelf, 15 UST 471, TIAS 5578, 499 UNTS 311, article 5(1) & (8). SOONS 56-58 examines the meaning of these two paragraphs, concluding that the customary international law rules are essentially the same as those set out in paragraphs 1 and 8 of article 5.

[13] 1958 Convention on the High Seas, 13 UST 2312, TIAS 5200, 450 UNTS 82, article 2.

[14] The United Kingdom agreement with the position may be found in 56 Br. Y.B. Int'l L. 1985, at 501. The United States concurs in this position. Soon comes to the same conclusion after reviewing the *travaux préparatoires*, state practice, and the views of publicists. SOONS 47-55.

[15] 1958 Convention on the Territorial Sea and the Contiguous Zone, 15 UST 1606, TIAS 5639, 516 UNTS 205, articles 1-2.

[16] 56 Br. Y.B. Int'l L. 1985, at 501; SOONS 46.

[17] 1958 Convention on Fishing and Conservation of Living Resources of the High Seas, 17 UST 138, TIAS 5969, 559 UNTS 285.

1958 Geneva Conventions contain very little treaty law on MSR and marine surveys.[18] Nevertheless, prior to the LOS Convention, freedom of MSR and to conduct marine surveys existed in most of the oceans seaward of the narrow territorial sea, and of the seabed seaward of 200 meters depth or where the continental shelf could not be exploited.

Legal Regimes Under the LOS Convention

During that decade-long negotiations that culminated in the adoption on December 10, 1982, of the UN Convention on the Law of the Sea, the United States sought to maximize the areas in which MSR could continue to be conducted free of coastal State control, to create a regime that maximized timely and unencumbered access by foreign researchers to areas under coastal State jurisdiction, and to maintain the right to conduct marine surveys seaward of the territorial sea free of coastal State control. These negotiations were conducted in the context of increasing acceptance of a 12-mile territorial sea under coastal State sovereignty, of the 200-mile exclusive economic zone (EEZ) under coastal State jurisdiction for economic purposes, and of an expanded continental shelf that was at least 200 miles wide, and could be even wider for the broad-margin States such as the United States.

The results of those difficult negotiations resulted in a diminution of the oceanic areas in which there was freedom of MSR, coupled with a consent regime for MSR in the EEZ and on the subjacent continental shelf,[19] while the freedom to conduct marine surveys was largely unchanged.[20] In 1983, the President decided that, Part XI aside, the rest of the LOS Convention supported U.S. interests, including that of encouraging freedom of marine scientific research.[21]

During the decade following adoption of the LOS Convention, questions arose as to the legal status of the non-seabed provisions of the Law of the Sea Convention. Some of its provisions -- mostly coastal State rights, including the right to control MSR -- have been widely accepted and thus came to be considered as part of international law. However, other provisions -- mostly duties, including coastal State duties to foreign researchers regarding MSR -- were not adequately followed and thus are clearly binding only on States party to the Convention now that it has entered into force.

More specifically, the LOS Convention clearly recognizes the maximum breadth of the territorial sea is 12 nautical miles. Only those 17 States now claiming a broader territorial sea might disagree,[22] and their number is steadily diminishing.[23] Entry into force of the LOS

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[18] This regime is replaced by the detailed regime set out in the LOS Convention, for States parties to these treaties. LOS Convention, article 311(1).

[19] SOONS 261.

[20] de Marffy, *Marine Scientific Research*, *in* 2 A HANDBOOK ON THE NEW LAW OF THE SEA 1140 (Dupuy & Vignes eds., 1991) ("the balance is tipped much more in favour of coastal States than in favour of researching States, and this is perhaps harmful to scientific research in general").

[21] President's Ocean Policy Statement, *supra* n. 3.

[22] Eleven of them claim a 200 mile territorial sea: Benin, Congo, Ecuador, El Salvador, Liberia, Nicaragua, Panama, Peru, Sierra Leone, Somalia, Uruguay. Cameroon claims a 50 mile territorial sea; Syria claims a 35 mile territorial sea; Nigeria and Togo claim a 30 mile territorial sea; Angola claims a 20 mile territorial sea. The Philippines claims a territorial sea which extends to 285 miles in some locations.

Convention increases the pressure on them to roll back their claims. Within that territorial sea, the coastal State exercises complete sovereignty, and MSR is now clearly under its exclusive control. The LOS Convention explicitly provides that the coastal State has "the exclusive right to regulate, authorize and conduct" MSR in its territorial sea, which may be "conducted only with the express consent of and under the conditions set forth by the coastal State."[24] Further, the LOS Convention expressly states that the "carrying out of research or survey activities" makes passage through the territorial sea not innocent[25] and expressly authorizes the coastal State to enact laws and regulations relating to innocent passage through the territorial sea in respect of "marine scientific research" as well as "hydrographic surveys".[26]

Under the LOS Convention, the regime of passage through international straits does not in other respects affect the legal status of the waters forming such straits or the exercise by the States bordering the straits of their sovereignty or jurisdiction over such waters.[27] Accordingly article 40 provides that during transit passage through such straits, foreign ships, "including marine scientific research and hydrographic survey ships," may not carry out any research or survey activities without the prior authorization of the States bordering straits. The same rules apply to archipelagic sea lanes passage.[28]

International law now recognizes the right of all coastal States to claim EEZs, that may extend seaward 200 miles from their territorial sea baselines, or to median lines where the opposite coasts are less than 400 miles apart. Indeed, some 90 coastal States have done so.[29] International law further recognizes that within its EEZ a coastal State may exercise jurisdiction over MSR.[30] The LOS Convention provides the legal framework for the exercise of that jurisdiction.[31]

International law also now recognizes the sovereign right of the coastal State to explore (and exploit) the natural resources of its continental shelf, which may -- as in the case of the United States -- extend beyond 200 miles, but in most cases no more than 350 miles from the territorial sea baseline.[32] The Convention provides the legal framework for the exercise of MSR jurisdiction on the continental shelf.[33]

Seaward of the EEZ lie the high seas and the seabed beyond the limits of national jurisdiction. Here the LOS Convention clearly advances the rights of the scientific community by expressly recognizing, for the first time, that MSR is a freedom of the high seas that may be

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[23] Sixteen States have rolled back their territorial sea claims to 12 miles since international agreement was reached on that limit: Albania, Argentina, Brazil, Cape Verde, Gabon, Germany, Ghana, Guinea, Guinea-Bissau, Haiti, Madagascar, Maldives, Mauritania, Senegal, Tanzania and Tonga. As recently as May 16, 1995, Panama announced at the second meeting of States Parties to the LOS Convention that it was considering rolling back its 200 mile territorial sea claim to 12 miles.

[24] LOS Convention, article 245.

[25] *Id.*, article 19(2)(j).

[26] *Id.*, article 21(1)(g).

[27] *Id.*, article 34(1).

[28] *Id.*, article 54.

[29] For a recent list, see U.S. Dep't of State, Limits in the Seas No. 36 (Rev. 7, 1995).

[30] LOS Convention, article 56(1)(b)(ii).

[31] *Id.*, article 246.

[32] *Id.*, article 76.

[33] *Id.*, article 246.

exercised by all States.[34] Further, all States, as well as the International Seabed Authority, are permitted to carry out MSR in the seabed beyond national jurisdiction.[35] On the other hand, the LOS Convention is silent regarding marine surveys seaward of the territorial sea.

MSR Under the LOS Convention

The conduct of MSR is fully regulated by Part XIII of the LOS Convention which does not apply to marine surveys of any sort. The Convention confirms the right of all States and competent international organizations to conduct MSR[36] and the duty to facilitate the conduct of MSR in accordance with the terms of the Convention.[37] The Convention sets forth the rights and obligations of States and competent international organizations with respect to the conduct of marine scientific research in different areas.

TERRITORIAL SEA

Article 245 recognizes the unqualified right of coastal States to regulate, authorize and conduct marine scientific research in the territorial sea. Therefore, access to the territorial sea, and the conditions under which a research project can be conducted there, are under the exclusive control of the coastal State.[38]

ARCHIPELAGIC WATERS

As archipelagic waters are under the sovereignty of the archipelagic State, marine scientific research is subject to the consent of that State.[39]

INTERNATIONAL STRAITS AND ARCHIPELAGIC SEA LANES

Part XIII contains no provisions specifically targeted to international straits or archipelagic sea lanes. However, under article 40, during transit passage, marine scientific research and hydrographic survey ships "may not carry out any research or survey activities without the prior authorization of the States bordering straits." The same rule applies to such ships exercising the right of archipelagic sea lanes passage.[40]

EEZ AND CONTINENTAL SHELF

Under article 246, coastal States have the right to regulate, authorize and conduct marine

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[34] *Id.*, articles 87(1)(f) & 257.

[35] *Id.*, articles 143 & 256.

[36] *Id.*, article 238.

[37] *Id.*, article 239.

[38] *See also id.*, articles 21(1)(g), 19(2)(j)), 40 and 54. There is no appeal if consent is refused or unreasonable conditions are imposed. 56 Br. Y.B. Int'l L. 1985, at 501.

[39] SOONS 153.

[40] LOS Convention, article 54.

scientific research in the EEZ and on the continental shelf. Access by other States or competent international organizations to the EEZ or continental shelf for a marine scientific research project is subject to the consent of the coastal State. The consent requirement, however, is to be exercised in accordance with certain standards and qualifications.

In normal circumstances, the coastal State is under the obligation to grant its consent to requests to conduct MSR in its EEZ or on its continental shelf. (It is explicitly provided that circumstances may be normal despite the absence of diplomatic relations.[41]) The coastal State, nevertheless, has the discretion to withhold its consent if the research project is of direct significance for the exploration and exploitation of living or non-living resources; involves drilling, the use of explosives or introduction of harmful substances into the marine environment; or involves the construction, operation and use of artificial islands, installations or structures.[42] (The first of these grounds for withholding consent may be used on the continental shelf beyond 200 miles only in areas specially designated as under development.[43]) It may also withhold consent if the sponsor of the research has not provided accurate information about the project or has outstanding obligations in respect of past projects.[44] If requested, the coastal State should state the reasons for denying consent, otherwise the researching State will not be in a position to determine what adjustments would be require to enable the project to proceed.[45]

The consent of a coastal State for a research project may be granted either explicitly or implicitly. Article 248 requires States or organizations sponsoring projects to provide to the coastal State, at least six months in advance of the expected starting date of the research activities, a full description of the project. The research activities may be initiated six months after the request for consent, unless the coastal State, within four months, has informed the State or organization sponsoring the research that it is denying consent for one of the reasons set forth in article 246 or that it requires more information about the project. If the coastal State fails to respond to the request for consent within four months following notification, consent may be presumed to have been granted.[46] This provision should encourage timely responses from coastal States to requests for consent.

Consent may also be presumed under article 247 to have been granted by a coastal State for a research project in its EEZ or on its continental shelf undertaken by a competent international organization of which it is a member, if it approved the project at the time that the organization decided to undertake the project and it has not expressed any objection within four months of the notification of the project by the organization.

Article 249 sets forth specific conditions with which a State or competent international organization sponsoring research in the EEZ or on the continental shelf of a coastal State must comply. These include the right of the coastal State to participate in the project, in particular through inclusion of scientists on board research vessels; provision to the coastal State of reports

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[41] *Id.*, article 246(3)-(4).

[42] *Id.*, article 246(5)(a-c).

[43] *Id.*, article 246(6).

[44] *Id.*, article 246(5)(d).

[45] IV UNITED NATIONS CONVENTION ON THE LAW OF THE SEA 1982: A COMMENTARY 519, para. 246.17(b) (Rosenne & Yankov, eds. 1991).

[46] LOS Convention, article 252.

and access to data and samples; assistance to the coastal State, if requested, in assessing and interpreting data and results; and ensuring that results are made internationally available as soon as practicable. Additional conditions may be established by the coastal State with respect to a project falling into a category of research activities over which the coastal State has discretion to withhold consent pursuant to article 246.

If a State or competent international organization sponsoring research in the EEZ or on the continental shelf of a coastal State fails to comply with such conditions, or if the research is not being conducted in accordance with the information initially supplied to the coastal State, article 253 authorizes the coastal State to require suspension of the research activities. If those carrying out the research do not comply within a reasonable period of time, or if the non-compliance constitutes a major change in the research, the coastal State may require its cessation.

THE HIGH SEAS AND THE AREA

Article 87 expressly recognizes conduct of marine scientific research as a freedom of the high seas. Articles 256 and 257 further clarify that marine scientific research may be conducted freely by any State or competent international organization in the water column beyond the limits of the EEZ, as well as in the Area, *i.e.*, the seabed and ocean floor, and the subsoil thereof, beyond the limits of national jurisdiction.[47] Under article 143, research in the Area is to be carried out exclusively for peaceful purposes.

RESEARCH INSTALLATIONS AND EQUIPMENT

The conditions applicable to marine scientific research set forth in the Convention apply equally to the deployment and use of installations and equipment to support such research seaward of the baseline.[48] Such installations and equipment do not possess the status of islands, though safety zones of a reasonable breadth (not exceeding 500 meters) may be created around them, consistent with the Convention. They may not be deployed in such fashion as to constitute an obstacle to established international shipping routes. They must bear identification markings indicating the State of registry or the international organization to which they belong, and have adequate internationally agreed warning signals.[49]

RESPONSIBILITY AND LIABILITY

Pursuant to article 263(1), States and competent international organizations shall be responsible for ensuring that marine scientific research, whether undertaken by them or on their behalf and wherever conducted seaward of the baseline, is conducted in accordance with the Convention. Pursuant to article 263(2), States and organizations shall be responsible and liable for any measures they take in contravention of the Convention in respect of research by other States,

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[47] If no EEZ is claimed, continental shelf restrictions apply only as stated in article 246.

[48] LOS Convention, article 258.

[49] *Id.*, articles 259-262.

their natural or juridical persons or by competent international organizations and shall provide compensation for damage resulting from such measures. With respect to damage caused by pollution of the marine environment arising out of marine scientific research undertaken by or on the behalf of States and competent international organizations, such States or organizations shall be liable pursuant to article 235.[50]

Coastal State Practice Regarding MSR Under the LOS Convention

Many coastal States are complying with the MSR regime of the LOS Convention,[51] perhaps in no small part with the assistance of a practical guide to the implementation of the MSR provisions published in 1991 by the UN's Office for Ocean Affairs and the Law of the Sea.[52] Now that the Convention has entered into force, this booklet takes on increased importance in influencing States to comply with their particular duties.

There are, however, a number of States that are not complying with the Convention's MSR provisions. Some of them are party to the Convention (e.g., Brazil, Mexico); others are not (e.g., Chile, Colombia, Russia). The problems the United States has encountered include the following:

- delays in responding to requests for ship clearances;[53]
- last minute denial of permission to conduct the research;[54]
- requiring all data, regardless of format, be provided immediately prior to departure from last port of call;[55]
- requiring the data to be provided within a fixed time after leaving the coastal State's

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[50] *Id.*, article 263(3).

[51] The various legislative enactments are briefly summarized in UN Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, The Law of the Sea: Practice of States at the time of entry into force of the United Nations Convention on the Law of the Sea (UN Sales No. E.94.V.13, 1994), at 18, 37-38, 75-76, 83-84, 97-98, 134-35 & 182. National legislation is collected in UN Office for Ocean Affairs and the Law of the Sea, The Law of the Sea: National Legislation, Regulations and Supplementary Documents on Marine Scientific Research in Areas Under National Jurisdiction (UN Sales No. E.89.V.9, 1989).

[52] UN Office for Ocean Affairs and the Law of the Sea, The Law of the Sea: Marine Scientific Research - A Guide to the Implementation of the Relevant Provisions of the United Nations Convention on the Law of the Sea (UN Sales No. E.91.V.3, 1991) (hereinafter, UN, MSR Guide). This pamphlet also suggests standardization of the forms for seeking consent and for granting permission to conduct marine scientific research in areas of national jurisdiction.

[53] The last sentence of article 246(3) requires coastal States to establish rules and procedures ensuring that consent will not be delayed or denied unreasonably. The UN MSR Guide states the coastal State "should therefore respond as quickly as can reasonably be expected to requests for consent." UN, MSR Guide 11, at para. 52.

[54] *Ibid.*

[55] Article 249(1)(b) sets no fixed time-limits for providing the preliminary reports, final results and conclusions of the research to the coastal State. Providing even a preliminary report prior to the ship's departure is not practicable. SOONS 190. Common practice is to provide the preliminary report 30 days after completion of the field portion of the research.

waters, rather than after completion of the cruise;[56]

- requiring copies of data collected in international waters, or in waters under another's country's jurisdiction;[57]
- requiring data to be held in confidence and not placed into the public domain;[58]
- requiring the cruise reports to be submitted in other than English;[59]
- requiring more than one observer to be on board;[60]
- requiring the observer to be on board during non-research legs of a voyage;[61]
- requiring research and port call requests to be submitted other than through the Foreign Ministry;[62]
- Foreign Ministry's failing to forward cruise reports to cognizant organization;[63] and
- finally, slow or incomplete staffing and coordination among interested coastal State bureaucracies.[64]

Value of the LOS Convention Today for MSR

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[56] The UN MSR Guide states that "[a]ll efforts should be made to supply the final results and conclusions within a reasonable period of time" noting that the "time span between the end of the cruise and the availability of the final results can vary substantially depending upon the nature of the research." UN, MSR Guide 19, para. 92. Final reports usually take a year or longer to prepare.

[57] The coastal State has no right under the Convention to receive such data, until it is made public.

[58] Article 249(1)(e) requires the data be made internationally available, unless it is of direct significance for the exploration and exploitation of natural resources. U.S. law requires that U.S. government-funded data must become part of the public domain. CITE

[59] The Convention is silent on this question. The UN MSR Guide recommends that consideration be given to providing the coastal State with reports "written in a language which can be read by scientists of the coastal State." UN, MSR Guide 19, para. 93.

[60] The right to participate under article 249(1)(a) is qualified to the extent that it must be "practicable". The UN MSR Guide notes that, if the right to participate is to be meaningful at all, the researching State "must always reserve space for at least one coastal State scientist on board," while recognizing only in extreme situations would that be impracticable, such as on a two- or three-man submersible. The Guide also cautions that "excessive demands should not be made". UN, MSR Guide 16, para. 78. Consistent with the UN MSR Guide conclusion that "[t]he coastal State may be able to claim more than one participant only if, and to the extent that, there is space available," two scientific participants are generally permitted on board U.S. research vessels when space allows. However, there may be occasions when participation is not practical, or, conversely, when more than two may participate. *Accord*, SOONS 189.

[61] This is not authorized by article 249.

[62] Under article 250, all communications concerning marine scientific research projects "shall be made through appropriate official channels, unless otherwise agreed." Soons states that it is always most safe to use diplomatic channels. SOONS 193.

[63] To avoid problems the UN MSR Guide recommends also sending a copy directly to the coastal State scientists involved. UN, MSR Guide 19, para. 90. The Guide also recommends the researching State expressly inform the coastal State involved, after final results and conclusions of a research project have been provided to it, that all obligations related to a specific research project have in its opinion been fulfilled, to avoid invocation of article 246(5) by the coastal State to withhold consent to future projects because of outstanding obligations to it from a prior research project. UN, MSR Guide 20, para. 99.

[64] The UN MSR Guide points out the need for the coastal State to have a single office to process applications for consent and be able to coordinate the request among the relevant government agencies. UN, MSR Guide 9, paras. 42, 43, 46.

The foregoing naturally casts doubt on the value, today, of the LOS Convention to the marine scientific community. That need not be the case.

The Convention is approaching universal acceptance. The Convention entered into force November 16, 1994, for more than 60 States, and is now in force for more than 70 States, including Brazil and Mexico, Germany, Italy and Australia. Many other industrialized countries have indicated they have taken political decisions to adhere to the Convention, including the United Kingdom, Japan, New Zealand and South Korea. Israel has announced that it too is reconsidering adhering to the Convention.[65] Finally, as noted above, the President has transmitted the LOS Convention to the Senate for its advice and consent to accession.

Regarding MSR, the President's Letter of Transmittal stated: "In light of the essential role of marine scientific research in understanding and managing the oceans, the Convention sets forth criteria and procedures to promote access to marine areas, including coastal waters, for research activities."[66] The Secretary of State's Report expanded on the importance of the Convention to MSR:

> The essential role of marine scientific research in understanding and managing the oceans is also secured. The Convention affirms the right of all States to conduct marine scientific research and sets forth obligations to promote and cooperate in such research. It confirms the rights of coastal States to require consent for such research undertaken in marine areas under their jurisdiction. These rights are balanced by specific criteria to ensure that coastal States exercise the consent authority in a predictable and reasonable fashion to promote maximum access for research activities.[67]

So how can those coastal States be convinced to accept and carry out their new duties? More than a decade's experience before the Convention entered into force suggests little hope for doing so outside the Convention regime. However, in at least three ways the Convention helps make real the balance reflected in the Convention's terms? In at least three ways

First, States party to the Convention are legally bound by their treaty relationships to comply with the Convention's provisions which by their nature are more explicit than customary law.

Second, U.S. accession to the Convention would finally place it on a level playing field with other countries. Coastal States would no longer have the excuse that they were bound by the Convention and the United States was not - a significant political improvement.

Third, the Convention provides a scheme for resolving MSR disputes with coastal States. This, in and of itself, is an improvement over the present situation. Further, the dispute settlement regime is a major accomplishment. Indeed, it may provide the only way to restrain -- and roll back -- excessive coastal State constraints on the conduct of MSR.

MSR DISPUTE SETTLEMENT REGIME

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[65] 6 State Dep't Dispatch Supplement No. 1, Feb. 1995, at 53.

[66] Sen. Treaty Doc. 103-39, at IV; 6 State Dept. Dispatch Supplement No.1, Feb. 1995, at 1.

[67] Sen. Treaty Doc. 103-39, at VII; 6 State Dept. Dispatch Supplement No.1, Feb. 1995, at 2.

Article 264 provides that "disputes concerning the interpretation or application of the provisions of [the LOS] Convention with regard to marine scientific research shall be settled" in accordance with the sections on "compulsory procedures entailing binding decisions" and the limitations and exceptions thereon, set out in Part XV, "Settlement of Disputes", Parts 2 and 3, respectively.

Fora

The Convention permits a State to choose one or more fora for the settlement of disputes concerning the interpretation or application of the Convention:

- the International Tribunal for the Law of the Sea, to be situated in Hamburg, Germany;
- the International Court of Justice, at the Hague;
- arbitration; or
- special arbitration.

(These are in addition to the Sea-Bed Disputes Chamber of the International Tribunal for the Law of the Sea for disputes under its jurisdiction.)

The President has indicated that the U.S. intends to elect arbitration and special arbitration where permitted by the Convention, and to exempt from compulsory dispute settlement (CDS) those activities permitted by article 298, including military activities, such as military activities by government vessels and aircraft engaged in non-commercial service, and disputes concerning law enforcement activities, in regard to the exercise of sovereign rights or jurisdiction over marine scientific research.[68]

CDS Regime for MSR

With regard specifically to MSR, the Convention provides that "disputes concerning the interpretation or application of the provisions of this Convention with regard to marine scientific research shall be settled" by the compulsory dispute procedures.[69]

Unfortunately, article 272(2)(a) goes on to carve out two substantial exceptions:

- the exercise by the coastal State of a right or discretion under article 246 concerning MSR in the EEZ and on the continental shelf; and
- a decision by the coastal State to order suspension or cessation of a research project in accordance with article 253, because the research activities are not being conducted in accordance with the information communicated to the coastal State under which the consent was based; or the State fails to comply with the conditions established by the State under article 249 regarding participation, receipt of preliminary results, access to all the data and samples derived from the research, assessment of that data when requested by the coastal State, insuring international availability of the research results; informing the coastal State immediately of any major changes in the research program; or removal of the scientific research installations or equipment once the research is completed.

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[68] Sen. Treaty Doc. 103-39, at IV, X; 6 State Dept. Dispatch Supplement No.1, Feb. 1995, at 1, 4.

[69] LOS Convention, article 297(2).

MSR exempted from CDS thus includes the following:

- the general right to regulate, authorize and conduct MSR in the EEZ or on the continental shelf,[70] and
- the discretion to withhold consent for MSR in its EEZ or on the continental shelf if that project:

(a) is of direct significance for the exploration and exploitation of natural resources, whether living or non-living. However, article 246(6) precludes a coastal State from exercising its discretion to withhold consent if the project is to be undertaken on the continental shelf beyond 200 miles, and outside specific areas the coastal State has at any time publicly designated as "areas in which exploitation or detailed exploratory operations focused on those areas" are occurring or will occur within a reasonable period of time;

(b) involves drilling into the continental shelf, the use of explosives or the introduction of harmful substances into the marine environment;

(c) involves the construction, operation or use of artificial islands, installations and structures for economic purposes, and installations and structures which may interfere with the exercise of the rights of the coastal State in the EEZ or on the continental shelf; or

(d) contains inaccurate information communicated to the coastal State, or if the researching State has outstanding obligations to the coastal State from a prior research project.

Interim measures

There are two other provisions favoring the coastal State:

- Article 265, Interim Measures, provides that pending settlement of a dispute authorized MSR will not begin or continue "without the express consent of the coastal State concerned."
- Further, the provisions of article 292 authorizing a tribunal or court to order the prompt release of vessels and crews applies by its terms only to detentions for fishing and pollution violations.[71] Thus there is no guaranteed right of prompt release if a foreign research vessel were detained by the coastal State for violating its MSR laws and regulations.

Remedies for Improper Exercise of Discretion

What aspects of MSR then are subject to dispute resolution? Two important coastal State duties come to mind: The duty of the coastal State to grant consent, in normal circumstances, for MSR projects in the EEZ or on the continental shelf, and the duty to establish rules and procedures ensuring that such consent will not be delayed or denied unreasonably.

Although these may not appear to be very important, it seems that the very existence of these areas provides the researching State leverage over the coastal State that is not implementing the MSR regime consistent with the terms of the Convention.

In a situation where the United States now has very little leverage over recalcitrant coastal States, and there is little incentive for those States to change their laws, regulations or procedures, the mere fact that their non-compliance can be brought before third parties can only be an improvement in the present situation, and should lead to greater conformity with the MSR regime in the Convention.

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[70] *Id.*, article 246(1).

[71] *See id.*, articles 73(2), 220(7) and 226(1)(b); *cf.* article 27(3).

Further, U.S. accession to the LOS Convention would provide the opportunity to try, an opportunity present while the United States remains outside the treaty regime.

Finally, U.S. accession to the Convention would enable the United States to consider establishing a Freedom of MSR Program analogous to the NSC-directed State-Defense Freedom of Navigation Program that since 1979 has helped conform state practice with the navigational provisions of the Convention.[72] Similar results should be sought for MSR.

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[72] *See* ROACH & SMITH, EXCESSIVE MARITIME CLAIMS, Chapter I.

APPENDIX XIII

SCHEDULING PROCEDURE REVIEW

A Ship Scheduling Procedure Review Committee chaired by Rick Jahnke met 7 January 1997 to address perceived weakness in the ship scheduling process. These were:

1. Information Exchange
2. Insufficient Project Tracking
3. Cost Benefit Analysis
4. Timing of Science Meetings and Milestones
5. Other Factors (additional charges caused by shifting ships)

The following recommendations were presented:

1. Revise the ship-time request form
2. Develop a ship request tracking system relational data base
3. Automate the procedure for PI input on preliminary schedules and schedule changes
4. Standardize procedures for all users
5. Optimize scheduling meeting and procedure times (encourage more regional communications)
6. Cost benefit analysis system
7. Variable costs should be handled by Program Managers on an individual basis

ACTION TO DATE:

Revised Electronic Ship Time Request form (work in progress).

Two parts, single page for proposals and scheduling followed by an extensive second part for cruise planning. Part one submitted with proposal, part two after funding or special request. Each request will have a backup archive file of pertinent traffic.

Posted by year to web on world chart, geographically located in pull down box.

On-line ship schedule form. Auto cruise track posted to web on world chart. All PIs automatically notified at posting and for subsequent changes.

Transit bank auto-update for no cost cruises of opportunity.

Future work. Program ship daily cost, distance and fuel use into ship track program to provide a first level cut at a cost analysis.

APPENDIX XIV

Z-DRIVE STATUS UPDATE

NSF

- **NAVSEA/ONR Study:**
  - ◊ **Glosten collecting operating use data on ships.**
  - ◊ **LIPS doing metallurgical analysis of failed *Thompson* upper gear (not yet received).** (Mailed 9/16)
  - ◊ **WHOI contracted for analysis of failed *Knorr* lower gear.**
  - ◊ **Interim report due late September. Tentative meeting in Seattle 9/25.**

- **Spare lower units for *Thompson, Revelle, Atlantis, Brown* are at MARFAC SIO.**

- ***Knorr* port drive repaired/rebuilt failure analysis underway.**

- ***Thompson* upper unit gear due 17 September (13 weeks manufacturing lead time).**

- Discuss this situation with LIPS. (per Sujata)

Z-DRIVE STATUS UPDATE

- **NAVSEA/ONR Study:**
  - ◊ **Glosten collecting operating use data on ships.**
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APPENDIX XV

UNOLS COUNCIL ELECTIONS

September 18, 1997

The UNOLS Nominating Committee has assembled the following slate of candidates for the UNOLS Council positions to be filled at the 1997 Annual Meeting. This election will be held in accordance with the UNOLS Charter as readopted September 1995. The current membership of the Council and a UNOLS Directory are attached.

Nominations are invited from the floor during the Annual Meeting. Such nominations may be made only by designated representatives of UNOLS institutions, and must be accompanied by the nominee's concurrence and qualifications. The nominee must meet the requirements of the UNOLS Council position he/she is nominated to fill.

UNOLS COUNCIL SLATE

OPERATOR REPRESENTATIVE (3-year term) - from among designated representatives of Member Operator institutions:

John Diebold	Lamont-Doherty Earth Observatory
Richard Hey	University of Hawaii
Thomas Shipley	University of Texas

NON-OPERATOR REPRESENTATIVE (3-year term) - from among designated representatives of Member Non-Operator institutions:

Cindy Lee	State University of New York, Stony Brook
Barbara Prezelin	University of California, Santa Barbara

AT-LARGE (3-year term) - individual affiliated with any UNOLS Member institution:

Robert Knox	Scripps Institution of Oceanography, University of California, San Diego
Thomas Lee	RSMAS/University of Miami

VITAE

John Diebold

Research Scientist, Lamont-Doherty Earth Observatory
Research interests include application of Multichannel seismic and wide angle seismic techniques to study genesis and development of oceanic crust, plateaus, and continental accretion.
Participated in more than 50 legs on various research ships as technician, scientist, and chief scientist.

Richard Hey

Professor, Hawaii Institute if Geophysics and Planetology, School of Ocean and Earth Science and Technology/University of Hawaii
Plate Tectonics.
Seagoing scientist with extensive experience using UNOLS research vessels.

Robert Knox

Associate Director, Scripps Institution of Oceanography Ship Operations and Marine Technical Support
Research Oceanographer, Physical Oceanography Research Division, Scripps Institution of Oceanography, University of California, San Diego
Physical Oceanography; Global and equatorial ocean circulation and acoustic remote sensing.

Cindy Lee

Professor, Marine Sciences Research Center, State University of New York, Stony Brook
Chemical Oceanography; Marine organic geochemistry; production and decomposition of biogenic organic matter; organic nitrogen cycle biogeochemistry; analytical chemistry of amino acids and amines.

Thomas Lee

Research Professor, Rosentiel School of Marine and Atmospheric Science/University of Miami
Chair, RSMAS Ship Operations Committee
Chair of the Harbor Branch Oceanographic Institution/RSMAS Joint Marine Operations Oversight Committee
Physical Oceanography

Thomas Shipley

Research Scientist, University of Texas, Institute for Geophysics
Marine Geology and Geophysics: Research specializations include convergent margin tectonics and deep ocean seismic stratigraphy. Most experience has been with geophysical remote sensing tools, including multichannel seismic techniques.
Participated in over 30 cruises in the last 25 years.

Barbara Prezelin

Professor, University of California, Santa Barbara
Biological Oceanography: Phytoplankton ecology, with an emphasis on light regulation of photosynthesis and primary production in diverse ocean regions. Publication of close to 120 scientific publications and environmental assessment and policy reports. Served on numerous science policy boards.