

# UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

SUMMARY REPORT OF THE OCTOBER 23, 1987

UNOLS ANNUAL MEETING  
NATIONAL TRUST FOR HISTORIC PRESERVATION  
1785 MASSACHUSETTS AVENUE NW  
WASHINGTON, DC 20036

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Summary Report of the UNOLS Annual Meeting

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Summary Report of the UNOLS Annual Meeting  
October 23, 1987

National Trust for Historic Preservation  
1785 Massachusetts Avenue NW  
Washington, D.C.

**General:** Issues and items are addressed in the order in which they were taken up at the October, 1987 UNOLS Annual Meeting. Exceptions to the order in the published agenda (Appendix I) are noted.

The meeting was attended by representatives of the eighteen UNOLS Member institutions (Appendix II), representatives from National Science Foundation, Office of Naval Research, Minerals Management Service, National Oceanic and Atmospheric Administration and Department of State, the UNOLS Advisory Council, UNOLS Office staff, participants and members of the UNOLS community.

Information provided by the UNOLS Office included: UNOLS Fleet Scheduling Contacts, UNOLS Marine Operations Contacts, List of UNOLS Advisory Councils, List of Executive Committees and Summary of UNOLS Research Vessel Fleet Operations (Appendices III-VII).

George Keller, UNOLS Chair, called the meeting and welcomed attendees to the UNOLS Annual Meeting for 1987.

The Chair next reported on UNOLS activities since the 1986 Annual meeting and on current critical issues. (The report from the UNOLS Chair also covered Advisory Council activities. A separate Advisory Council Report was not delivered.)

The 1986-1987 year had been a very active one for UNOLS. Ship acquisition and modification programs of critical interest to UNOLS and academic community were proceeding at a rapid pace. UNOLS institution proposals to operate the new Navy-constructed AGOR-23 were to be evaluated in November, 1987. Design and construction proposals for the new research vessel were due in January, 1988.

The level of activity on ship acquisition and modification had been high within ONR, the Office of the Oceanographer and NSF. UNOLS, primarily the Fleet Replacement and Fleet Improvement Committees, had worked closely with these agencies in providing a model for research vessel specifications to ONR/OON, and then in working with those agencies to mold the Circular of Requirements (COR) for AGOR-23. Sections on science support facilities in NSF/OCE's Long Range Plan for Ocean Sciences had drawn heavily on the UNOLS Fleet Replacement Plan.

These instances demonstrate that UNOLS' advice has been sought and followed, especially concerning ships and research facilities. They demonstrate further that UNOLS must rise to the challenge and responsibility of providing expert advice on facilities matters, and that UNOLS must provide a focus for unity among their members and the ocean community.

Problems continued with NAVSEA preliminary designs for the proposed AGOR-X SWATH ship. In the opinion of the Advisory Council and of a study group from the Fleet Improvement Committee (FIC) the NAVSEA design is not appropriate for use as a research vessel in support of academic oceanography. The design is an adaptation based on a NAVSEA common hull. It would be very large for UNOLS operations, probably very expensive to operate and would not accommodate well either to towing scientific arrays or to over-the-side operations. (The underwater hull extends 30 feet aft from the stern and 8 feet outboard from working decks.) If the design cannot be modified to be a suitable research vessel, then UNOLS should advise the Navy that they would not accept such a ship.

Activities concerning UNOLS fleet improvement have been intense. The UNOLS Fleet Replacement Committee has been succeeded by the Fleet Improvement Committee. The FIC has been made a permanent committee and arrangements have been made wherein the FIC works directly with NSF and ONR, under a separate grant. Issues addressed by the FIC are among the most critical for UNOLS.

Community needs for an ice-capable research vessel for use in the Antarctic have been addressed by NSF/DPP. A Request for Proposals had been issued for an icebreaking research vessel for Antarctic service. (This would be in addition to POLAR DUKE.) NSF/DPP had reached accommodation on NSF's icebreaking R/V and science support for one Coast Guard replacement icebreaker. From the UNOLS/ocean community perspective, it is good that an icebreaking R/V will be available for research use in the Antarctic but bad that no UNOLS/academic fleet ships will be employed there. UNOLS must strive for more effective interaction with DPP. (UNOLS/FIC has led in developing science mission requirements for their RVIB, and has strong representation on the DPP advisory committee for the new ship.)

ONR, WHOI and Scripps have nearly reached acceptance on plans for the rehabilitation/stretching of MELVILLE and KNORR, and the Preliminary Design Phase is nearing completion. It remains to secure funds before entering contracts. After overhaul and refit, the two ships would meet virtually all of the UNOLS/FIC Science Mission Requirements for large, general purpose research vessels. If adequate funds for the refit

package are not forthcoming, difficult decisions must be faced on what to cut and how to proceed.

NSF, ONR and all federal agencies face the potential for Gramm-Rudman cuts..Reduction in FY-1988 funds available for ocean sciences could present severe problems for fleet operations.

UNOLS members were to hear later in the meeting of ONR and NSF efforts to improve Joint Management of the UNOLS fleet. Efforts are coordinated to provide effective use of the fleet and, at the same time, account for the critical interests of both agencies. These efforts toward coordination are to the best interest of UNOLS. UNOLS strongly supports these efforts to assure integration of management and operation of the academic fleet.

During the year, UNOLS initiated and implemented a Security Assessment and Training program for UNOLS ships and crews. The program has been completed for all appropriate ships and crews.

UNOLS continued its emphasis on Ship Scheduling. By exchanging information on electronic mail in advance of the meetings and careful preparation, the Scheduling Meetings were much improved. Recommendations made by Ship Scheduling Groups are forwarded to the UNOLS Chair and Advisory Council. After consideration there, the Chair forwards appropriate recommendations to sponsoring federal agencies.

The ALVIN Review Committee, chaired by Feenan Jennings, continues to successfully oversee the ALVIN program. ALVIN functions as a UNOLS National Facility, and has the benefit of an interagency agreement for support among NOAA, NSF, and ONR.It continues as one of the most successful research facility support programs in the U.S.. The ARC has recommended and UNOLS has agreed to sponsor a new *Submersible Science Study*, to be completed by a group under Bruce Robison. The first UNOLS *Submersible Science Study*, completed in 1982, was a factor in decisions to replace LULU with ATLANTIS II as ALVIN support vessel

The UNOLS Chair and Advisory Council had, in 1986, invited proposals to host the UNOLS Office and to propose an Executive Secretary. Two proposals were received, and after review, the Chair and Council recommended that the Office continue at the University of Washington and that Bill Barbee continue as Executive Secretary. UNOLS membership noted that the UNOLS Charter is vague about the policy for rotating the Office among UNOLS institutions, and asked that definitive guidelines be provided. The Advisory Council agreed, and recommended that the UNOLS Charter be modified to provide for a review of UNOLS Office performance after three years, that it should



stay at an institution usually six years and never longer than nine years. An appropriate amendment to the UNOLS Charter will be presented to the UNOLS membership.

The Research Vessel Operators Council activities were focused on safety in marine operations and on vessel management. The RVOC participated in a UNOLS-wide survey of vessel insurance and institution risk-management policies. At the request of the UNOLS Chair they developed recommendations on ship layup policy, for UNOLS consideration. They have recommended that the UNOLS Office develop a data base for Ship Time Requests, accessible through electronic mail. RVOC continues to be a valuable UNOLS forum for a variety of issues.

The use and disposal of radioactive substances aboard UNOLS ships has become an issue. There is little consistency among the policies of various institutions and neither operators nor users can be assured that individual projects will be licensed. The Advisory Council has initiated a study, chaired by Tom Malone to develop and recommend a minimum essential policy to govern the use of radioactive substances aboard UNOLS ships. After development and acceptance the policy will be incorporated into *UNOLS Research Vessel Safety Standards*.

The R/V CAYUSE had been transferred from Moss Landing Marine Laboratories in California to the University of Maine, and was on the last leg of the transfer.

George Keller summarized by saying that the sponsoring federal agencies solicit UNOLS advice. UNOLS must accept the responsibility to address issues, even if they are hard ones. UNOLS institutions should participate in the process so that they can be comfortable in supporting recommendations. If representatives of UNOLS institutions have comments or concerns they should be passed to the UNOLS Chair, Advisory Committee or Office.

The Chair closed by noting that T. K. Tex Treadwell who had participated in UNOLS from its inception had retired from TAMU. He was commended for his longstanding contributions to UNOLS and would be missed.

#### COMMITTEE REPORTS

Feenan Jennings, Chair, reported that the ALVIN Review Committee had recommended eleven new ALVIN requests for 1988 at their May meeting. These recommendations together with earlier recommendations for 1988 dives would result in a schedule of about 180 dives, all in the eastern Pacific. Projects would be conducted in California Basins, Guaymas, the EPR, Gorda-Juan de Fuca and on Pacific Seamounts. ALVIN/ATLANTIS II were expected to return to Woods Hole for

overhaul early in 1989. At the end of 1988 there would be no holdover of recommended ALVIN projects.

The ARC was to hold a workshop in San Francisco during AGU to solicit interest in using ALVIN in 1989 and beyond.

Plans for a U.S.-France Bilateral to conduct a submersible-based research project on the Mid-Atlantic Ridge will be an important factor in scheduling ALVIN over the next several years. Although ALVIN is very likely to participate, there are as yet no firm plans for the project.

The ARC had recommended and the Advisory Council had endorsed new members to the Committee: Mary Scranton, SUNY Stony Brook, Doug Nelson, University of California Davis, Geof Thompson, WHOI, and Casey Moore, University of California, Santa Cruz. UNOLS members endorsed the recommendations.

Bruce Robison, University of California Santa Barbara, reported on efforts to develop the *Submersible Science Study for the 1990's*. He had met with members of the study group, Bob Aller, Dick Cooper, Joe Curray, Dan Fornari, Bob Wall Karen Wishner and Dana Yoerger to address the study objectives: to assess trends and needs of science that can best be studied by use of *in situ* facilities, and to develop a plan and recommendations for implementation.

Among the study recommendations will be: increase support for the ALVIN facility, improve the reliability of ALVIN subsystems, provide manned access to depths of 6000 meters or more (by leasing foreign submersibles, improved access to SEA CLIFF and, eventually, building a >6000 meter submersible for U.S. academic use), provide more widespread access to medium depth manned and unmanned systems and improve coordination among federal agencies supporting *in situ* research. A final draft of the report was expected early in 1988.

Worth Nowlin, Fleet Improvement Committee Chair, reported on FIC membership, objectives and activities (Appendix VIII). The Committee had held three meetings during 1987, focused on their six objectives. In addition, a subcommittee chaired by Marcus Langseth had worked with OON, ONR and NAVSEA to try to achieve a preliminary design for a SWATH research vessel (AGOR-X) appropriate for service in the UNOLS fleet.

The FIC intends to revise the *UNOLS Fleet Improvement Plan* during 1987-1988. They have developed a report on future demand for the UNOLS fleet (Jim Murray), defined the need for an Arctic research vessel to be acquired during the 1990's, contracted for the preliminary design of a medium endurance, general purpose research vessel (the Glosthen/Scripps concept design), developed Science Mission Requirements for small intermediate and ice capable research vessels and have begun

to assess the effectiveness of a submarine for use as a research vessel. The Committee has been working with individual institutions to develop a fleet-wide plan for the refit and renovation of intermediate and CAPE-class research vessels.

Bob Dinsmore reported for Marcus Langseth on efforts to achieve a design for the SWATH (AGOR-X). The FIC subcommittee had met several times with representatives of ONR, NAVSEA and OON, providing them with a comprehensive set of scientific requirements and advice on layout and handling gear. Nevertheless, they had been unsuccessful in influencing NAVSEA to consider designs more suitable to UNOLS research vessel needs. Essentially, the NAVSEA preliminary design (to be described later in the meeting) is an adaptation based on a common hull that is very large, probably expensive to operate and does not accommodate either towing scientific arrays or over-the-side operations. In the NAVSEA design, underwater hulls extend more than 30 feet aft from the working deck and about eight feet outboard. Although there is high interest within UNOLS in a SWATH research vessel, there is even greater concern that the fleet could be burdened with an inappropriate ship. (The Advisory Committee has recommended that UNOLS advise the Navy that they would not accept a ship built to the unacceptable NAVSEA design. This recommendation was to be put to the UNOLS membership for their approval.)

George Keller urged that UNOLS members not give up on prospects for an AGOR-24, but to be alert to concerns that the new ship be built to a suitable design.

Robert Corell, Assistant Director for Geosciences, National Science Foundation briefed UNOLS on NSF-ONR efforts to develop an effective joint policy for managing the research fleet to support academic oceanography (Appendix IX). The purpose of discussions is to establish a framework and set of guidelines for the effective coordination of the NSF and ONR research fleet-support activities. The discussions include:

- planning, funding and scheduling research vessel operations,
- scientific outfitting of research vessels and support of marine operations,
- planning and funding for research vessel layups,
- construction, modification and overhaul of major research vessels, and
- planning and funding for special needs within the academic fleet (Arctic research vessel, research aircraft, etc.).

Two precepts guiding the discussions are that the two agencies are committed to a joint approach, and that UNOLS is the keystone to an effective, productive research fleet management scheme.



Working teams for the discussions are, for facilities, Don Heinrichs and Gene Silva, and for science, Eric Hartwig and Mike Reeve. Discussions are nearly completed, and will result in a joint policy statement.

**Bruce Robinson, ONR, endorsed the effort toward a joint NSF-ONR policy.** RADM Smoke Wilson, newly designated Chief of Naval Operations and Fred Saalfeld both support the joint effort.

ONR has been very active in support of the academic fleet, especially in acquiring new vessels and improving existing large vessels. Acquisition of the new AGOR-23 for operation by a UNOLS institution is proceeding apace, and renovation of KNORR and MELVILLE will soon be initiated. ONR appreciates the UNOLS position on preliminary SWATH designs and is working the problem.

**Jack Bash, Chair, reported on activities of the Research Vessel Operators Council.** The RVOC held their 1987 meeting in Durham, NH, hosted by Gene Allmendinger and the University of New Hampshire. In addition to UNOLS members, the meeting was attended by one Canadian representative. **The meeting was concentrated on operational safety and marine insurance/risk management.**

The RVOC addressed problems associated with marine technicians and shared use equipment, but determined that they did not represent the appropriate forum to address these problems. **They recommended that UNOLS convene a meeting of those representatives of UNOLS institutions who write Marine Technician, Instrumentation and Ship Equipment proposals.** The charge to the group should be to examine policies on marine technicians and shared use equipment at each of the UNOLS Member institutions to determine common grounds for consistent practices, and to make recommendations defining workable universal policy.

Meeting attendees recognized the need for an RVOC accident-reporting network, but did not agree on a mechanism for reporting. After further study an appropriate design will be developed and implemented.

Tex Treadwell who had chaired the RVOC safety committee and had prepared the 1985 edition of the *UNOLS Research Vessel Safety Standards* had resigned. Bill Coste was appointed new Chair, and will lead in preparation of a new edition of the *Safety Standards*, to be issued in 1989. The RVOC may also develop safety training manuals for use by crews and scientists embarked on UNOLS vessels.



A study had been completed on wages and salaries of officers and crews on UNOLS research vessels. The study is useful in determining comparability in pay by UNOLS ship operators, and is available on request.

Results of the UNOLS contract for medical advisory service were reviewed. Although marine superintendents were satisfied with the level of medical advise, etc. provided under the contract, they saw no value in the special summary study made by the contractor of medical incidents on UNOLS vessels. The RVOC recommended that UNOLS no longer support the summary study.

Professor Dennis Nixon, University of Rhode Island, together with Dolly Dieter discussed risk management for UNOLS fleet operations. They noted that liability to operating institutions and sponsoring agencies is ever-increasing, especially as related to personal injury, etc. Insurance costs are rising, and only careful action can keep these cost in bounds. UNOLS should investigate the benefits of an insurance club for all UNOLS operators. To be successful, UNOLS will have to establish strong health standards for crews, sound operational policies and a strong, well-documented safety program.

At the request of the UNOLS Chair, the RVOC had developed a position paper on ship layups. (See report of the UNOLS Advisory Council meeting of October 21, 1987, Appendix II.) The paper recommends that ships potentially subject to layup be notified as early as possible. Notifications of potential layup should be on the basis of tentative schedules that fall below a recognized level of utilization. (The UNOLS Chair submitted the position paper to NSF and ONR facilities managers for their comments; UNOLS action was deferred pending agency reaction.)

THE RVOC has scheduled their 1988 meeting in Seattle, to be hosted by the University of Washington.

The UNOLS Chair had requested that representatives from the Office of the Oceanographer of the Navy speak to UNOLS members on the Navy's research vessel building program and on the SWATH model proposed as AGOR-23. Bob Winokur and CDR Pat Dennis made the presentation.

The Office of the Oceanographer had embarked on their shipbuilding program in response to one of the Secretary of the Navy's initiatives to revitalize ocean science in the Navy. In addition to building ships for the Navy pool of research vessels, the OON is the sponsoring organization for the AGORS- 23 and -24, or other Navy-built research vessels to support academic oceanography. This vigorous ship acquisition program had provided two TAGS vessels in 1985, two

conversions-to-coastal-survey vessels in 1987, AGOR-23 to the academic fleet also in 1987 and were budgeted to provide a SWATH to the academic fleet in 1989.

**Preliminary design of the UNOLS SWATH had been provided by NAVSEA.** Although UNOLS and FIC have had concerns about this design NAVSEA has worked hard to accommodate to community recommendations on performance, capabilities and layout. UNOLS members should also recognize that insistence on major design changes at this stage could jeopardize acquisition of any second ship from the Navy.

After several questions from among meeting attendees as to the effectiveness of UNOLS input into the NAVSEA design process, George Keller summarized by urging that UNOLS not accept a ship that is not suitable for research vessel use. He suggested that UNOLS should not give up on acquiring a second Navy-built research vessel but should work to assure that a suitable vessel be built.

Mike Rawson reported on the Ship Scheduling Meeting held on October 22. The meetings were successful in supporting nearly all science projects that had been funded. (Two projects were still not scheduled: one in the Southern Ocean would require excessively long transit, and investigators for the second had not yet accepted the only ships available.) Funding for ship operations in 1988 (in \$millions):

	NSF	ONR	OTHER	TOTAL
Prior to Oct. 22 Meeting				
Cost ests. for 5406 days	\$32.3	\$5.1	\$4.4	\$41.91
Available funding	\$26.6	\$5.1	\$4.4	\$36.21
Anticipated shortfall	\$ 5.7	---	---	\$ 5.7
After Oct. 22 Meeting				
Cost ests. for 4930 days	\$29.18	\$5.15	\$4.46	\$38.79
Available funding	\$26.6	\$5.15	\$4.46	\$36.21
Remaining shortfall	\$ 2.6	----	----	\$ 2.6.

Adjustments made during the meeting to reduce estimated cost were to eliminate double bookings and unfunded projects, and to increase schedule efficiency. The remaining shortfall is real, however, and will have to be eliminated by deferring a few projects from 1988 until 1989, by further consolidating schedules among a few ships with light schedules (and laying up one or two) and by reducing some estimated operating costs, especially the costs for shore based administration. **Every**

institution must carefully examine their ship administration costs for possible reductions.

Bob Dinsmore reported to the meeting on Inspections for UNOLS ships. By December, 1987 24 of the 25 designated UNOLS vessels will have been inspected. The NSF inspection program has also included a few non-UNOLS vessels such as the POLAR DUKE.

The goals of the NSF inspection program and of the Navy INSURV is to assure good material condition, safety in operations and readiness for sea. In general, UNOLS ships are well maintained, safely operated and ready for sea. Conditions are better than they were a few years ago.

Some deficiencies have been found throughout the fleet: watertight integrity, fire and bilge pumps and emergency equipment, oily water separators, load line surveys, science equipment, especially winches, and compliance with *UNOLS Research Vessel Safety Standards*. Although these deficiencies are serious, no UNOLS vessel has been declared unfit for sea; operators are always notified of deficiencies.

#### REMARKS FROM FUNDING AGENCIES

Hawley Thomas provided a description of the Minerals Management Service Environmental Program for FY-1987 (Appendix X). The proposed Environmental Studies funding for the year is about \$22 million. The program will be administered out of regional offices, Anchorage, Alaska, \$7 million, Vienna, Virginia for the Atlantic, \$800,000, Metairie, Louisiana, \$4.5 million, Los Angeles, California for the Pacific, \$8.3 million. The Washington headquarters will administer national studies for \$1.4 million.

Al Kalvitis, NOAA/NURP reported that NOAA's undersea research program had received a Senate mark of \$11 million and a House mark of \$5.5 million.

Scott McKellor, NOAA/Office of Marine Operations reported that NOAA would operate 22 vessels for about 4200 days at sea in FY-1987, with the PIERCE inactive. In FY-1988 they expect to re-activate the PIERCE to operate 23 ships for about 4430 days. NOAA expects to acquire an intermediate depth Swath mapping system for installation on an East Coast Class III ship. NOAA has not developed a fleet replacement plan.

Keith Kaulum, ONR, reported that NAVSEA expected to open bids for AGOR-23 in early June, 1988, a slip of about two months. The ONR decision on an operator for AGOR-23 was expected in November.

ONR was progressing as best possible on the KNORR-MELVILLE renovation program. There remained high probability of securing funds for contracts under the program.

John McMillan, NSF/OCFS, discussed late information on the NSF/OCFS budget for 1988, issues arising from the recent Advisory Committee to Ocean Sciences (ACOS) oversight report and other matters. The best estimates for the 1988 budget were presented:

**NSF BUDGET ESTIMATES**

October, 1987

	1985 Actual	1986 Actual	1987 Estimate	1988*
<b>OCEAN SCIENCES DIVISION</b>				
Ocean Sciences Research	58.2	56.9	66.4	74.3
Oceanographic Facilities	34.9	33.7	37.2	43.9
Ocean Drilling Program	27.6	28.9	30.1	31.3
	\$120.7	119.5	133.7	149.5

**OCEANOGRAPHIC FACILITIES DETAIL**

**Operations**

Ship Operations	23.8	24.0	26.0 <sup>1</sup>	26.6 <sup>2</sup>
ALVIN, Aircraft, Misc.	2.9	1.6	1.8	1.8
Marine Technicians	2.4	2.5	3.1	3.3
	\$ 29.1	28.1	30.9	31.7

**Acquisition & Development**

Science Instruments	1.8	1.6	1.8	
Shipboard Equipment	1.7	1.4	1.7	7.4
Technology Development	1.6	1.7	2.4	
AMS Center	-	-	-	2.9
UNOLS, Ship Const., Misc.	0.7	0.9	0.4	1.0
Interagency/Internation.**	-	-	-	0.9
	\$ 5.8	5.6	6.3	12.2

**TOTAL** \$ 34.9 33.7 37.2 43.9

\*Estimate using House Appropriations markup.

\*\*Not identified separately in previous years.

<sup>1</sup>In 1987, an additional \$1.5 million was provided by the Ocean Drilling Program.

<sup>2</sup>In 1988, an additional \$1.8 million is estimated from the Ocean Drilling Program.



These estimates do not include possible Gramm-Rudman reductions.

Of particular concern is that NSF funds to support ship operations are estimated to total about \$28.4 million, while estimates of the NSF share of the total of all Ship Operations Proposals are \$29.2 million. Prospects for a modest shortfall are real, and potential budget reductions could make for an unacceptably large shortfall. All UNOLS institutions should take every reasonable step to reduce their ship operations costs.

Shared-use equipment and marine technicians continue as issues in that individual UNOLS institution policies and bases for charges do not present a consistent aspect to users. It is difficult for a user to know what he will get, and what it will cost him. Program manager Larry Clark is pursuing a resolution.

The NSF ship construction program is outlined in the *Long Range Plan for the Division of Ocean Sciences, National Science Foundation* (pp. 60-68, 77).

Tom Forehan reported that the DPP portion of the NSF budget passed through House appropriations hearings without reduction, and with modest reduction in the Senate. Request for Proposals has been issued for the icebreaking research vessel to be acquired by DPP. The response date is November 9, 1987. DPP has also moved to acquire the MYSIS for support of "local" Antarctic operations. DPP has need for and expects to keep both the POLAR DUKE and the new RVIB in service.

Tom Cocke, Department of State, discussed problems in acquiring foreign clearances and provided a *Summary of 1986 Clearance Results* (Appendix XI). In 1985, 278 requests were processed, in 1986 259, and in 1987 to date, over 230. Prospective investigators and operators are urged to use the *UNOLS Foreign Clearance Handbook*. Beginning in 1988, Department of State will no longer accept requests which are not totally in compliance with the UNOLS Handbook.

#### UNOLS BUSINESS

UNOLS Members had earlier been advised of the Advisory Council's recommendation to revise Annex I to the Charter, *A Procedure for Coordinating Ship Schedules*. In addition, the Charter as a whole was before the Membership for re-adoption. The reason for revising Annex I, Ship Scheduling, was so that the Charter would conform to current, improved practices.

After several editorial changes were advanced and accepted, UNOLS Members adopted the revised Annex I, *A Procedure for*

*Coordinating Ship Schedules.* In a following action UNOLS Members readopted the UNOLS Charter as a whole.

A Slate of Nominees had been prepared and distributed to UNOLS Members and the community (Appendix XII). Candidates were presented for UNOLS Vice Chair, two Advisory Council members representing Member institutions, and one Advisory Council member representing Associate institutions. After the Slate was prepared a second Advisory Council vacancy occurred among members representing Associate institutions. Two additional nominees were advanced: James Kennett, University of California, Santa Barbara and Eli Silver, University of California, Santa Cruz.

Jay Langfelder was elected UNOLS Vice Chair. Tom Johnson and Art Maxwell were elected to the Advisory Council from among Member institutions. Tom Malone and James Kennett (two year term) were elected to the Advisory Council from among Associate institutions.

There being no further business, the meeting was adjourned.

# UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

ANNUAL MEETING AGENDA  
0830, Friday, October 23, 1987

National Trust for Historic Preservation  
1785 Massachusetts Avenue NW  
Washington, DC 20036

**Introduction and Welcome** - George H. Keller, UNOLS Chairman.

**Chairman's Report** - George H. Keller will report on UNOLS activities and current issues.

**UNOLS Advisory Council Report** - John Martin, Chairman, AC, will report on the Council's activities in 1986-87 and agenda for 1987-88.

**UNOLS Fleet Improvement Committee** - Worth Nowlin, Jr., Chairman, FIC, will report on Committee activities since reconstitution, issues being addressed and plans for the coming year.

**UNOLS Alvin Review Committee** - Feenan Jennings, ARC Chairman, will report on ALVIN program status, ARC activities and advanced planning.

**UNOLS has commissioned a Submersible Science Study.** The study effort is underway through a subcontract let in August 1987. BRUCE ROBISON, study leader, will give an interim report.

**ONR-NSF Research Fleet Policy** - Agency representatives from NSF and ONR will jointly present agency policy on management of the academic research fleet; status of implementation.

**Research Vessel Operators' Council** - Jack Bash, Chairman, RVOC, will report on the RVOC annual meeting (Oct. 12-14) and RVOC activities.

12-1

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12-1

**Regional Ship Scheduling Groups** - 1. A report from Scheduling Group Chairmen on recommended schedules for 1988, 1988 ship use and 1988 costs versus anticipated support. 2. Automated request register. A proposal will be presented.

**Vessel Inspection Program** - Robertson P. Dinsmore, participant in both the NSF inspection and Navy INSURV programs, will report on results, trends and issues.

**Remarks from Federal Funding Agencies** - Information from Federal funding agencies (NSF, ONR, MMS, USGS, NOAA, DOE) on forecasts for fiscal 1987, 1988 (and beyond) ship and science support. DPP presentation on R/V's with ice capability. Representative from the Office of the Oceanographer of the Navy will present their perspective on design and construction of the SWATH (AGOR-X) and on further ship construction plans. Other issues that agency representatives may wish to lay before UNOLS.

**Clearances for Research in Ocean Regions Restricted by Foreign States** - An overview and summary from Department of State, Office of Marine Science and Polar Affairs.

**UNOLS Business** - Regular issues and items for UNOLS membership consideration, discussion and action.

**UNOLS Charter** - 1. Changes to the Charter have been recommended by the Advisory Council; the changes, dealing mainly with the ship scheduling process, will be presented to the membership for their action. 2. The Charter as a whole will be introduced to the membership for re-adoption.

**Election of UNOLS Vice-Chairman** - An election will be held, a slate of nominees has been distributed.

**Election of Two Members to the Advisory Council** - The terms for one Advisory Council member from Member Institutions and one from Associate Members expire. Slates of nominees have been distributed.

**Appointment of Three Members to ALVIN Review Committee** - Recommendations will be presented to UNOLS for action.

**Other Business** - Issues, actions or recommendations as might be introduced by the Advisory Council, committees, sponsors or the membership.

The order of items on the agenda may be rearranged to speed things along toward a hoped-for mid-afternoon adjournment.



# UNOLS

UNIVERSITY-NATIONAL  
OCEANOGRAPHIC LABORATORY SYSTEM

ANNOUNCEMENT OF AGENDA

## UNOLS ANNUAL MEETING

October 23, 1987

National Trust for Historic Preservation  
1785 Massachusetts Ave. N.W.  
Washington, D.C.

This meeting is open to all investigators, users, operators and sponsors of university oceanographic facilities. It is a public forum for discussing the utilization and scheduling of research vessels and other facilities as well as their support and future planning.

*George H. Keller, Chairman*

*William D. Barbee, Executive Secretary*

The University-National Oceanographic Laboratory System is a planning mechanism for oceanographic facilities. It is a joint effort of the academic community and the federal funding agencies, principally the NSF, ONR, NOAA, DOE, MMS and USGS.

UNOLS provides for community-wide cooperation and review of the utilization of facilities and opportunities for access to those facilities. It assesses the match of programs to the needs of academic programs and makes recommendations of priorities for replacing or improving the numbers and mix of facilities.

UNOLS serves as a focus for new ideas and requirements for specialized facilities.

UNOLS does not replace direct contact between the investigator and institution's operating facilities. It does, however, serve as a backup and clearinghouse for information and coordination that might not otherwise be available to the researcher and his laboratory.

UNOLS is composed of institutions and laboratories that operate or utilize Federally supported facilities. It is composed of an Advisory Council of both operators and users, a UNOLS Office hosted by a member institution, the Research Vessel Operator's Council and committees dealing with advanced planning, national facilities and fleet replacement. Membership consists of persons from major oceanographic facility operators whose role is to provide facility services to other users. Associate Membership is available to ship users and operators of other vessels. Membership in either category does not guarantee Federal funding.

For further information  
please contact:

William D. Barbee  
Executive Secretary  
UNOLS Office, WB-15  
School of Oceanography  
University of Washington  
Seattle, WA 98195

(206) 543-2203



MEMBERS

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- MOSS LANDING MARINE LABORATORIES  
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*Dr. Steven R. Ramp*
- UNIVERSITY OF NEW HAMPSHIRE  
*Professor E. Eugene Allmendinger*
- NEW YORK STATE UNIVERSITY COLLEGE  
AT BUFFALO
- NEW YORK STATE UNIVERSITY AT  
STONY BROOK  
*Dr. J.R. Schubel*
- NORTH CAROLINA STATE UNIVERSITY  
*Dr. Robert H. Weisberg*
- UNIVERSITY OF NORTH CAROLINA AT  
WILMINGTON  
*Dr. Robert Y. George*
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*Dr. Julian P. McCreary*
- OCCIDENTAL COLLEGE  
*Dr. John S. Stephens, Jr.*
- OLD DOMINION UNIVERSITY  
*Dr. William M. Dunstan*
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*Dr. Peter R. Betzer*
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*Dr. John M. Ziegler*
- WALLA WALLA COLLEGE  
*Dr. Lawrence McCloskey*
- UNIVERSITY OF WISCONSIN AT MADISON  
*Dr. Robert A. Ragotzkie*
- UNIVERSITY OF WISCONSIN AT MILWAUKEE  
*Dr. David E. Edgington*
- UNIVERSITY OF WISCONSIN AT SUPERIOR  
*Ms. Mary Balcer*

## SHIP SCHEDULING CONTACT

THE UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM  
LIST OF RESEARCH VESSELS (>20M) OPERATED BY UNOLS INSTITUTIONS

APPENDIX III

5/87

OPERATOR	NAME	LOA (FT/M)	BUILT/ CONVERTED	NUMBER OF SCIENTISTS	OWNER	SHIP SCHEDULING CONTACT
University of Hawaii Hawaii Institute of Geophysics 2525 Correa Road Honolulu, Hawaii 96822	MOANA WAVE	213/65	1973/1984	20	NAVY	Cpt. J.W. Coste Marine Superintendent (808) 847-2661
University of Alaska Institute of Marine Science Fairbanks, Alaska 99701	ALPHA HELIX	133/41	1966	15	NSF	Dr. Thomas Royer Associate Professor (907) 474-7835
University of Washington School of Oceanography, WB-10 Seattle, Washington 98195	T.G. THOMPSON C.A. BARNES	209/64 66/20	1965 1966/1984	22# 6	NAVY NSF	Dr. Brian T.R. Lewis Director (206) 543-6487
Oregon State University College of Oceanography Corvallis, OR 97331	WECOMA	177/54	1975	16	NSF	Captain Kennard M. Palfrey, Jr. Marine Superintendent (503) 867-3011
Moss Landing Marine Laboratories P.O. Box 223 Moss Landing, California 95039	POINT SUR	135/41	1981	12	NSF	Mr. Michael Prince Ship Scheduler (408) 633-3304
University of Southern California Inst. for Marine & Coastal Studies 820 South Seaside Avenue Terminal Island, California 90731	VELERO IV	110/34	1948/1972	12	USC	Mr. Don Newman, Mgr. Marine Support Facility (213) 830-4570
University of California, San Diego Scripps Institution of Oceanography La Jolla, California 92093	MELVILLE T. WASHINGTON NEW HORIZON R.G. SPROUL	245/75 209/64 170/52 125/38	1969 1965 1978 1981/1985	29 22 13 12	NAVY NAVY U.C. U.C.	Dr. George Shor, Jr. Ship Scheduler Code A-010 (619) 452-2840
University of Michigan Great Lakes & Marine Waters Center 2200 Bonisteel Boulevard Ann Arbor, Michigan 48109	LAURENTIAN	80/24	1974	8	U.MI.	Dr. Linda Goad Marine Superintendent (313) 763-5393
Texas A & M University Department of Oceanography College Station, Texas 77843	GYRE	182/54	1973	21	NAVY	Mr. Wes Lovaas Marine Operations Officer (409) 845-7211
The University of Texas 700 The Strand Galveston, Texas 77550	FRED MOORE	165/50	1967	20	U.T.	Mr. William H. Mitchell Marine Superintendent (409) 761-2276
University of Miami, RSMAS Oceanographic Facility 1620 Port Boulevard Miami, Florida 33132	ISELIN CALANUS	170/52 64/20	1972 1971	16 6	U.M. U.M.	Mr. Ronald Hutchinson Marine Operations (305) 373-3830
University System of Georgia Skidaway Institute of Oceanography P.O. Box 13687 Savannah, Georgia 31416-0687	BLUE FIN	72/22	1972/1975	8	U.G.	Dr. David W. Menzel Director (912) 356-2480
Duke/UNC Oceanographic Consortium Duke University Marine Laboratory Beaufort, North Carolina 28516	CAPE HATTERAS	135/41	1981	12	NSF	Captain Eric B. Nelson Marine Superintendent (919) 728-3372
The Johns Hopkins University Chesapeake Bay Institute Shady Side, Maryland 20764	R. WARFIELD	106/32	1967	10	J.H.U.	Mr. Bruce Cornwall Marine Superintendent (301) 867-7550, Ext. 246
University of Delaware College of Marine Studies 700 Pilottown Road Lewes, Delaware 19958	CAPE HENLOPEN	120/37	1976	12	U.D.	Mr. Wadsworth Owen Dir. of Marine Operations (302) 645-4320
Lamont-Doherty Geological Observatory Columbia University Palisades, New York 10964	CONRAD	209/64	1962	23	NAVY	Dr. Michael Rawson Marine Science Coordinator (914) 359-2900
University of Rhode Island Graduate School of Oceanography Narragansett, Rhode Island 02882	ENDEAVOR	177/54	1976	16	NSF	Mr. John F. Bash Marine Superintendent (401) 792-6203
Woods Hole Oceanographic Institution Woods Hole, Massachusetts 02543	KNORR ATLANTIS II OCEANUS DSRV ALVIN	245/75 210/64 177/54 25.8	1970 1963 1975 1964	24 29* 12 2	NAVY WHOI NSF NAVY	Ms. Barbara Martineau Marine Ops Administrator (617) 548-1400, Ext. 2450

\*20 Scientists (includes one medic)  
Plus 9 ALVIN group

#Includes one Marine Technician

## MARINE OPERATIONS CONTACT

THE UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM  
LIST OF RESEARCH VESSELS (>20M) OPERATED BY UNOLS INSTITUTIONS

APPENDIX IV  
5/87

OPERATOR	NAME	LOA (FT/M)	BUILT/ CONVERTED	CREW	NUMBER OF SCIENTISTS	OWNER	MARINE OPERATIONS CONTACT
University of Hawaii Hawaii Institute of Geophysics 2525 Correa Road Honolulu, Hawaii 96822	MOANA WAVE	213/65	1973/1984	16	20	NAVY	Captain J. W. Coste Marine Superintendent (808) 847-2661
University of Alaska Institute of Marine Science P.O. Box 730 Seward, Alaska 99664	ALPHA HELIX	133/41	1966	9	15	NSF	Ms. E. R. Dieter Assoc. Dir. for Mar. Ops (907) 224-5261
University of Washington School of Oceanography, WB-10 Seattle, Washington 98195	T.G. THOMPSON C.A. BARNES	209/64 66/20	1965 1966/1983	22 2	22# 6	NAVY NSF	Captain William Jeffers Marine Superintendent (206) 543-5062
Oregon State University College of Oceanography Newport, OR 97365	WECOMA	177/54	1975	12	16	NSF	Captain Ken Palfrey Marine Superintendent (503) 867-3011
Moss Landing Marine Laboratories P.O. Box 223 Moss Landing, California 95039	POINT SUR	135/41	1981	9	12	NSF	Mr. Michael Prince Ship Scheduler (408) 633-3304
University of Southern California Marine Support Facility 820 South Seaside Avenue Terminal Island, CA 90731	VELERO IV	110/34	1948/1972	11	12	USC	Mr. Don Newman, Mgr. Marine Support Facility (213) 743-6977
University of California, San Diego Scripps Institution of Oceanography La Jolla, California 92093	MELVILLE T. WASHINGTON NEW HORIZON ROBERT SPROUL	245/75 209/64 170/52 125/38	1969 1965 1978 1981/1985	23 23 12 5	29 22 13 12	NAVY NAVY U.C. U.C.	Capt. Jim Williams Marine Facilities Code P-005 (619) 225-9600
University of Michigan Great Lakes & Marine Waters Center 2200 Bonisteel Boulevard Ann Arbor, Michigan 48109	LAURENTIAN	80/24	1974	6	8	U.MI.	Dr. Linda Goad Marine Superintendent (313) 763-5393
Texas A & M University Department of Oceanography College Station, Texas 77843	GYRE	182/54	1973	11	21	NAVY	Mr. Wes Lovaas Marine Operations Officer (409) 845-7211
The University of Texas 700 The Strand Galveston, Texas 77550	FRED MOORE	165/50	1967	10	20	U.T.	Mr. William H. Mitchell Marine Superintendent (409) 761-2276
University of Miami, RSMAS Oceanographic Facility 1620 Port Boulevard Miami, Florida 33132	ISELIN CALANUS	170/52 64/20	1972 1971	12 2	16 6	U.M. U.M.	Mr. Ronald Hutchinson Operations Manager (305) 373-3830
University System of Georgia Skidaway Institute of Oceanography P.O. Box 13687 Savannah, Georgia 31416-0687	BLUE FIN	72/22	1972/1975	5	8	U.G.	Dr. David W. Menzel Director (912) 356-2480
Duke/UNC Oceanographic Consortium Duke University Marine Laboratory Beaufort, North Carolina 28516	CAPE HATTERAS	135/41	1981	10	12	NSF	Captain Eric B. Nelson Marine Superintendent (919) 728-3372
The Johns Hopkins University Chesapeake Bay Institute Shady Side, Maryland 20764	R. WARFIELD	106/32	1967	11	10	J.H.U.	Mr. Bruce Cornwall Marine Superintendent (301) 867-7550, Ext. 246
University of Delaware College of Marine Studies 700 Pilottown Road Lewes, Delaware 19958	CAPE HENLOPEN	120/37	1976	7	12	U.D.	Mr. Wadsworth Owen Dir. of Marine Operations (302) 645-4320
Lamont-Doherty Geological Observatory Columbia University Palisades, New York 10964	CONRAD	209/64	1962	23	23	NAVY	Captain John Dudley Marine Superintendent (914) 359-2900, Ext. 245
University of Rhode Island Graduate School of Oceanography Narragansett, Rhode Island 02882	ENDEAVOR	177/54	1976	12	16	NSF	Mr. John F. Bash Marine Superintendent (401) 792-6203
Woods Hole Oceanographic Institution Woods Hole, Massachusetts 02543	KNORR ATLANTIS II OCEANUS	245/75 210/64 177/54	1970 1963 1975	25 27 12	24 29* 12	NAVY WHOI NSF	Donald A. Moller Marine Ops Coordinator (617) 548-1400, Ext. 2277
			Totals	317	396		

\*20 Scientists (includes one medic)

## UNOLS ADVISORY COUNCIL

Rev 5/87

1971-1976. Comprised of four members from Member Institutions  
and three from Associate Members Institutions

1977. Charter Revision at Annual Meeting increased membership  
in the Advisory Council to eight - five from Member Institutions,  
and three from Associate Member Institutions. Three year term.

1971-1972		1978-1979		Term
J. V. Byrne, OSU, Chairman		G. H. Keller, OSU, Chairman		7/76-6/80
D. W. Menzel, SKIO		R. T. Barber, DUKE, V-Chairman		7/76-6/79
R. A. Ragotzkie, U/WISC.		G. C. Anderson, U/WA		7/78-6/81
H. M. Stommel, MIT		R. L. Fisher, SIO		7/77-6/80
W. S. Wooster, SIO		J. H. Martin, MLML		7/76-6/79
J. P. Craven, U/HAWAII		W. B. F. Ryan, L-DGO		7/78-6/81
C. L. Drake, DARTMOUTH (resigned 1972)		J. R. Schubel, SUNY/STONY BROOK		7/77-6/81
		J. M. Zeigler, VMS		7/78-6/81
1973-1974		1979-1980		
J. V. Byrne, OSU, Chairman	Expires	G. C. Anderson, U/WA, Chairman		7/78-6/81
J. P. Craven, U/HAWAII	5/75	J. R. Schubel, SUNY/SB, V-Chairman		7/77-6/80
D. W. Menzel, SKIO	5/74	G. H. Keller, OSU		7/76-6/80
A. F. Richards, LEHIGH	5/76	B. H. Robison, USCB		7/79-6/82
R. A. Ragotzkie, U/WISC	5/74	H. T. Rossby, URI		7/79-6/82
H. M. Stommel, MIT	5/74	W. B. F. Ryan, L-DGO		7/78-6/81
P. L. Parker, U/TEXAS	7/76	R. L. Fisher, SIO		7/77-6/80
R. C. Dugdale, U/WA	7/76	J. M. Ziegler, VIMS		7/78-6/81
R. Colwell, U/MARYLAND (Interim Appointee)		T. K. Treadwell, TAMU, ex-officio		7/78-6/80 CH
		J. H. Martin, MLML, ex-officio		7/79-6/80 V-CH
1974-1975		1980-1981		Term
J. V. Byrne, SIO, Acting Chairman	5/75	G. C. Anderson, U/WA, Chairman		7/78-6/81
P. L. Parker, U/TEXAS	7/76	H. T. Rossby, URI, V-Chairman		7/79-6/82
A. F. Richards, LEHIGH	7/76	B. H. Robison, USCB		7/79-6/82
W. S. Richardson, NOVA U, Ch (deceased)		C. B. Miller, OSU		7/70-6-83
R. J. Wold, U/WISC (resigned)		W. B. F. Ryan, L-DGO		7/78-6/81
R. C. Dugdale, U/WA	5/76	W. M. Sackett, U/S FL		7/80-6/83
J. P. Craven, U/HAWAII	5/76	D. W. Spencer, WHOI		7/80-6/83
		J. M. Zeigler, VIMS		7/78-6/81
		T. K. Treadwell, TAMU, ex-officio		7/79-6/81 UNOLS CH
		J. H. Martin, MLML, ex-officio		7/79-6/81 UNOLS V-CH
1975-1976		1981-1982		
R. C. Dugdale, BIGELOW, Chairman	5/77	B. H. Robison, UCSB, Chairman		7/79-6/82
P. L. Parker, U/TEXAS	7/76	H. T. Rossby, URI, V-Chairman		7/79-6/82
A. F. Richards, LEHIGH	7/76	R. W. Corell, UNH		7/81-6/84
T. K. Treadwell, TAMU	5/78	J. R. Curray, SIO		7/81-6/83
D. Hood, U/ALASKA	5/76	D. S. Gorsline, USC		7/81-6/84
F. Webster, WHOI	5/77	C. B. Miller, OSU		7/80-6/83
		W. M. Sackett, U/S FL		7/80-6/83
		J. C. Van Leer, U/MIAMI		7/80-6/83
		D. W. Spencer, WHOI ex-officio		7/81-6/82 UNOLS CH
		D. Frankenberg, UNC, ex-officio		7/81-6/82 UNOLS V-CH
1976-1977		1982-1983		
R. C. Dugdale, BIGELOW, Chairman	5/77	B. H. Robison, UCSB, Chairman		7/82-6/85
R. T. Barber, DUKE	5/79	J. R. Curray, SCRIPPS, V-Chairman		7/82-6/85
D. Frankenberg, UNC	5/79	R. W. Corell, UNH		7/81-6/84
M. G. Gross, JHU	5/78	D. S. Gorsline, USC		7/81-6/84
G. H. Keller, OSU	5/77	W. B. Sackett, U/S FL		7/80-6/83
J. H. Martin, MLML	5/79	J. C. Van Leer, U/MIAMI		7/80-6/83
T. K. Treadwell, TAMU	5/78	D. W. Spencer, WHOI, ex-officio		7/82-6/83 UNOLS CH
W. S. Wooster, U/WA, ex-officio		D. Frankenberg, UNC, ex-officio		7/82-6/83 UNOLS V-CH
F. Webster, WHOI, ex-officio				
1977-1978		1982-1983		
G. H. Keller, OSU, Chairman	7/76-6/80	B. H. Robison, UCSB, Chairman		7/82-6/85
D. Frankenberg, UNC, V-Chairman	7/76-6/79	J. R. Curray, SCRIPPS, V-Chairman		7/82-6/85
R. T. Barber, DUKE	7/76-6/79	R. W. Corell, UNH		7/81-6/84
R. L. Fisher, SIO	7/77-6/80	D. S. Gorsline, USC		7/81-6/84
M. G. Gross, JHU	7/75-6/80	W. B. Sackett, U/S FL		7/80-6/83
J. H. Martin, MLML	7/76-6/79	J. C. Van Leer, U/MIAMI		7/80-6/83
J. R. Schubel, SUNY	7/77-6/80	D. W. Spencer, WHOI, ex-officio		7/82-6/83 UNOLS CH
T. K. Treadwell, TAMU	7/75-6/78	D. Frankenberg, UNC, ex-officio		7/82-6/83 UNOLS V-CH
F. Webster, WHOI, ex-officio	7/76-6/78			
W. S. Wooster, U/WA, ex-officio	7/76-6/78			



UNOLS Advisory Council

Page 2

1983-1984

C. B. Miller, OSU, Chairman 7/80-6/86  
 H. B. Stewart, Jr., OLD DOM., V-Ch 7/83-6/86  
 R. W. Corell, UNH 7/81-6/84  
 D. S. Gorsline, USC 7/81-6/85  
 R. Larson, URI 7/82-6/85  
 B. H. Robison, UCSB 7/79-6/85  
 J. C. Van Leer, U/MIAMI 7/81-6/84  
 F. Webster, U/DEL, ex-officio 7/83-6/84 UNOLS CH  
 J. R. Curray, SCRIPPS, ex-officio 7/83-6/84 UNOLS V-CH

1984-1985

C. B. Miller, OSU, Chairman 7/80-6/86  
 H. B. Stewart, Jr., OLD DOM., V-Ch 7/83-6/86  
 R. P. Dinsmore, WHOI 7/83-6/86  
 D. S. Gorsline, USC 7/81-6/84  
 B. H. Robison, UCSB 7/79-6/85  
 A. E. Maxwell, U/TX, Austin 7/84-6/87  
 C. J. Lorenzen, U/WA 7/84-6/87  
 T. Malone, U/MD 7/84-6/87  
 F. Webster, U/DEL, ex-officio 7/83-6/84 UNOLS CH  
 R. W. Corell, UNH, ex-officio 7/84/6/85 UNOLS V-CH

1985-1986

C. B. Miller, OSU, Chairman 7/80-6/86  
 T. Malone, UMD, V-Chairman 7/84-6/87  
 R. P. Dinsmore, WHOI 7/83-6/86  
 C. J. Lorenzen, UWA 7/84-6/87  
 J. H. Martin, MLML 7/85-6/88  
 A. E. Maxwell, U/TX, Austin 7/84-6/87  
 C. N. Mooers, NPS 7/85-6/88  
 H. B. Stewart, Jr., OLD DOMINION 7/83-6/86  
 F. Webster, U/DEL, ex-officio 7/83-6/86 UNOLS CH  
 R. W. Corell, UNH, ex-officio 7/81-6/86 UNOLS V-CH

1986-1987

J. H. Martin, MLML, Chairman 7/85-6/88  
 T. Malone, UMD, Vice Chairman 7/84-6/87  
 R. P. Dinsmore, WHOI 7/83-6/89  
 R. A. Knox, Scripps 7/86-6/89  
 P. J. Fox, URI 10/86-6/87  
 K. C. MacDonald, UCSB 7/86-6/89  
 A. E. Maxwell, U TX/Austin 7/84-6/87  
 C. S. Yentsch, Bigelow 10/86-6/88  
 G. H. Keller, OSU, ex-officio 7/86-6/88 UNOLS CH  
 R. W. Corell, UNH, ex-officio 7/84-1/87 UNOLS V-CH \*

\* resigned 1/87

5/87

UNOLS Chairman and Vice-Chairman  
 Advisory Council Chairman and Vice-Chairman and Executive Secretary  
 (Executive Subcommittee consists of UNOLS Chairman and Vice-Chairman,  
 Advisory Council Chairman and Executive Secretary)

May 1971-1972		May 1979-1980	
A. E. Maxwell, WHOI	UNOLS CH	T. K. Treadwell, TAMU	UNOLS CH.
J. M. Savage, USC	UNOLS V-CH.	J. H. Martin, MLML	UNOLS V-CH.
J. V. Byrne, OSU	A/C Ch.	G. C. Anderson, U/WA	A/C CH.
R. P. Dinsmore, UNOLS	E/S	J. R. Schubel, SUNY/S.B.	A/C V-CH.
		T. R. Stetson, UNOLS	E/S
May 1972-1973		May 1980-1981	
A. E. Maxwell, WHOI	UNOLS CH.	T. K. Treadwell, TAMU	UNOLS CH.
J. M. Savage, USC	UNOLS V-CH.	J. H. Martin, MLML	UNOLS V-CH.
J. V. Byrne, OSU	A/C CH.	G. C. Anderson, U/WA	A/C CH.
R. P. Dinsmore, UNOLS	E/S	H. T. Rossby, URI	A/C V-CH.
		T. R. Stetson, UNOLS	E/S
May 1973-1974		May 1981-1982	
A. E. Maxwell, WHOI	UNOLS CH.	D. W. Spencer, WHOI	UNOLS CH.
J. M. Savage, USC	UNOLS V-CH.	D. Frankenberg, UNC/CH	UNOLS V-CH.
J. V. Byrne, OSU	A/C CH.	B. H. Robison, UCSB	A/C
R. P. Dinsmore, UNOLS	E/S	H. T. Rossby, URI	A/C V-CH.
		T. R. Stetson, UNOLS	E/S
May 1974-1975		May 1982-1983	
J. A. Knauss, URI	UNOLS CH.	D. W. Spencer, WHOI	UNOLS CH.
G. C. Shor, SIO	UNOLS V-CH.	D. Frankenberg, UNC/CH	UNOLS V-CH.
R. C. Dugdale, BIGELOW	A/C CH.	B. H. Robison, UCSB	A/C CH.
R. P. Dinsmore, UNOLS	E/S	J. R. Curray, SCRIPPS	A/C V-CH.
		W. D. Barbee, UNOLS	E/S
May 1975-1976		May 1983-1984	
J. A. Knauss, URI	UNOLS CH.	F. Webster, U/DEL	UNOLS CH.
G. C. Shor, SIO	UNOLS V-CH.	J. R. Curray, SCRIPPS	UNOLS V-CH.
R. C. Dugdale, BIGELOW	A/C CH.	C. B. Miller, OSU	A/C CH.
R. P. Dinsmore, UNOLS	E/S	W. D. Barbee, UNOLS	E/S
		May 1985-1986	
May 1976-1977		F. Webster, U/DEL	UNOLS CH.
W. S. Wooster, U/WA	UNOLS CH.	R. W. Corell, UNH	UNOLS V-CH.
T. F. Webster, WHOI	UNOLS V-CH.	C. B. Miller, OSU	A/C CH.
R. C. Dugdale, BIGELOW	A/C CH.	T. Malone, U/MD	AC V-CH.
T. R. Stetson, UNOLS	E/S	W. B. Barbee, UNOLS	E/S
		May 1986-1987	
May 1977-1978		G. H. Keller, OSU	UNOLS CH.
W. S. Wooster, U/WA	UNOLS CH.	R. W. Corell, UNH *	UNOLS V-CH.
T. F. Webster, WHOI	UNOLS V-CH.	J. H. Martin, MLML	A/C CH
G. H. Keller, OSU	A/C CH.	T. Malone, U MD	A/C V-CH
D. Frankenberg, UNC	A/C V-CH.	W. D. Barbee, UNOLS	E/S
T. R. Stetson, UNOLS	E/S		
May 1978-1979			
T. K. Treadwell, TAMU	UNOLS CH.		
A. F. Richards, LEHIGH	UNOLS V-CH.		
G. H. Keller, OSU	A/C CH.		
R. T. Barber, DUKE	A/C V-CH.		
T. R. Stetson, UNOLS	E/S		

\* resigned 1/29/87

## UNOLS RESEARCH VESSELS FLEET OPERATIONS - 1986 -

## CRUISE DAYS PROFILES

08/06/87

AGENCY	PHYS OCEAN	ACCOU STICS	CHEM OCEAN	BIOL OCEAN	ENVIR ECOL	FISH INVST	CLIM METEO	GEOLO GEOPH	MAP CHRTG	OCEAN ENGRG	TRAIN ING	TRANS NONSCI	TOTAL -----
NATL SCIENCE FNDTN	691.7	2.00	711.00	1020.78	97.00	26.00	.00	609.83	.00	34.00	7.00	204.08	3403.39
OFF. NAVAL RESEARCH	220.6	.00	23.00	4.00	.00	.00	.00	94.47	.00	16.00	.00	6.00	364.08
U.S. GEOL. SURVEY	.0	.00	5.00	.00	.00	.00	.00	2.00	.00	.00	.00	.00	7.00
MINERALS MNGT. SER.	.0	.00	.00	26.00	.00	.00	.00	.00	.00	.00	.00	.00	26.00
NATL OCEAN/ATMOSPH	.0	.00	.00	2.00	.00	.00	.00	.00	.00	.00	.00	.00	2.00
DEPT. OF ENERGY	28.0	.00	31.00	62.00	.00	.00	.00	.00	.00	.00	.00	.00	121.00
OTHER FEDERAL	7.0	.00	.00	2.50	.00	.00	.00	1.00	.00	.00	.00	.00	10.50
STATE/MUNICIPAL	59.0	.00	19.00	57.50	9.00	.00	.00	44.50	.00	2.00	17.00	.00	208.00
OTHER/PRIVATE	31.0	.00	35.00	.00	.00	.00	.00	50.00	.00	1.00	.00	.00	117.00
*****													
TOTALS	1037.31	2.00	824.00	1174.78	106.00	26.00	.00	801.80	.00	53.00	24.00	210.08	4258.97
PERCENT	24.36	.05	19.35	27.58	2.49	.61	.00	18.83	.00	1.24	.56	4.93	100.00

UNOLS RESEARCH VESSELS FLEET OPERATIONS - 1986 -

CRUISE DAYS PROFILES

08/06/87

INSTITUTION	PHYS OCEAN	ACCOUSTICS	CHEM OCEAN	BIOL OCEAN	ENVIR ECOL	FISH INVST	CLIM METEO	GEOLO GEOPH	MAP CHRTG	OCEAN ENGRG	TRAIN ING	TRANS NONSCI	TOTAL -----
UNIV. HAWAII	38.00	.00	117.00	14.00	.00	.00	.00	94.00	.00	.00	.00	.00	281.00
UNIV. ALASKA	40.00	.00	7.00	136.00	.00	.00	.00	.00	.00	.00	2.00	3.00	188.00
UNIV. WASHINGTON	109.31	2.00	47.00	90.78	.00	.00	.00	96.80	.00	.00	16.00	23.08	384.97
SCRIPPS INST. OCEAN	206.00	.00	102.00	242.00	31.00	.00	.00	180.00	.00	.00	.00	65.00	826.00
TEXAS A&M UNIV.	104.00	.00	138.00	63.00	.00	.00	.00	.00	.00	.00	6.00	.00	311.00
UNIV. TEXAS	.00	.00	.00	.00	.00	.00	.00	14.00	.00	.00	.00	.00	14.00
UNIV. MIAMI, RSMAS	13.00	.00	146.00	164.00	.00	.00	.00	16.00	.00	.00	.00	1.00	340.00
UNIV GA., SKIDAWAY	15.00	.00	52.00	71.00	.00	.00	.00	.00	.00	.00	.00	.00	138.00
DUKE UNIV/UNC	4.00	.00	10.00	79.00	66.00	.00	.00	11.00	.00	.00	.00	.00	170.00
JOHNS HOPKINS UNIV.	14.00	.00	15.00	70.00	.00	26.00	.00	.00	.00	.00	.00	.00	125.00
UNIV. DELAWARE	93.00	.00	16.00	28.00	.00	.00	.00	13.00	.00	.00	.00	.00	150.00
LAMONT-DOHERTY GEOL	.00	.00	.00	.00	.00	.00	.00	264.00	.00	.00	.00	23.00	287.00
UNIV. RHODE ISLAND	149.00	.00	7.00	44.00	.00	.00	.00	.00	.00	7.00	.00	29.00	236.00
WOODS HOLE OCEAN	144.00	.00	141.00	111.00	.00	.00	.00	109.00	.00	44.00	.00	44.00	593.00
UNIV. MICHIGAN	14.00	.00	.00	54.00	.00	.00	.00	.00	.00	2.00	.00	.00	70.00
MOSS LANDING MAR LAB	96.00	.00	26.00	8.00	9.00	.00	.00	4.00	.00	.00	.00	22.00	165.00
*****													
TOTALS	1037.31	2.00	824.00	1174.78	106.00	26.00	.00	801.80	.00	53.00	24.00	210.08	4258.97
PERCENT	24.36	.05	19.35	27.58	2.49	.61	.00	18.83	.00	1.24	.56	4.93	100.00



UNOLS RESEARCH VESSELS FLEET OPERATIONS - 1986 -

CRUISE DAYS PROFILES

08/08/87

VESSEL	PHYS OCEAN	ACCOUSTICS	CHEM OCEAN	BIOL OCEAN	ENVIR ECOL	FISH INVST	CLIM METEO	GEOLO GEOPH	MAP CHRTG	OCEAN ENGRG	TRAIN ING	TRANS NONSCI	TOTAL -----
MELVILLE	58.00	.00	.00	81.00	.00	.00	.00	57.00	.00	.00	.00	45.00	241.00
KNORR	54.00	.00	29.00	5.00	.00	.00	.00	51.00	.00	.00	.00	22.00	161.00
ATLANTIS II	.00	.00	77.00	38.00	.00	.00	.00	56.00	.00	34.00	.00	12.00	215.00
CONRAD	.00	.00	.00	.00	.00	.00	.00	264.00	.00	.00	.00	23.00	287.00
T.G. THOMPSON	102.31	.00	26.00	15.78	.00	.00	.00	79.80	.00	.00	.00	23.08	246.97
T. WASHINGTON	24.00	.00	57.00	38.00	.00	.00	.00	74.00	.00	.00	.00	7.00	200.00
ENDEAVOR	149.00	.00	7.00	44.00	.00	.00	.00	.00	.00	7.00	.00	29.00	236.00
OCEANUS	90.00	.00	35.00	70.00	.00	.00	.00	2.00	.00	10.00	.00	10.00	217.00
GYRE	104.00	.00	138.00	63.00	.00	.00	.00	.00	.00	.00	6.00	.00	311.00
MOANA WAVE	38.00	.00	117.00	14.00	.00	.00	.00	94.00	.00	.00	.00	.00	261.00
ISELIN	7.00	.00	128.00	41.00	.00	.00	.00	.00	.00	.00	.00	1.00	177.00
NEW HORIZON	73.00	.00	39.00	89.00	.00	.00	.00	23.00	.00	.00	.00	12.00	236.00
FRED H. MOORE	.00	.00	.00	.00	.00	.00	.00	14.00	.00	.00	.00	.00	14.00
CAPE FLORIDA	8.00	.00	.00	14.00	.00	.00	.00	.00	.00	.00	.00	.00	20.00
POINT SUR	96.00	.00	26.00	8.00	5.00	.00	.00	4.00	.00	.00	.00	22.00	161.00
CAPE HATTERAS	4.00	.00	10.00	79.00	66.00	.00	.00	11.00	.00	.00	.00	.00	170.00
ALPHA HELIX	40.00	.00	7.00	136.00	.00	.00	.00	.00	.00	.00	2.00	3.00	188.00
ROBERT G. SPROUL	51.00	.00	6.00	34.00	31.00	.00	.00	26.00	.00	.00	.00	1.00	149.00
CAPE HENLOPEN	93.00	.00	16.00	28.00	.00	.00	.00	13.00	.00	.00	.00	.00	150.00
WARFIELD	14.00	.00	15.00	70.00	.00	26.00	.00	.00	.00	.00	.00	.00	125.00
CAYUSE	.00	.00	.00	.00	4.00	.00	.00	.00	.00	.00	.00	.00	4.00
BLUE FIN	15.00	.00	52.00	71.00	.00	.00	.00	.00	.00	.00	.00	.00	138.00
CLIFFORD BARNES	7.00	2.00	21.00	75.00	.00	.00	.00	17.00	.00	.00	16.00	.00	138.00
CALANUS	.00	.00	18.00	109.00	.00	.00	.00	16.00	.00	.00	.00	.00	143.00
LAURENTIAN	14.00	.00	.00	54.00	.00	.00	.00	.00	.00	2.00	.00	.00	70.00
*****													
TOTALS	1037.31	2.00	824.00	1174.78	106.00	26.00	.00	801.80	.00	53.00	24.00	210.08	4258.97
PERCENT	24.36	.05	19.35	27.58	2.49	.61	.00	18.83	.00	1.24	.56	4.93	100.00

UNOLS RESEARCH VESSELS FLEET OPERATIONS - 1986 -

OPERATIONAL DAYS CHARGED BY SPONSOR

08/08/87

INSTITUTION	NATL SCI. FNDDTN	OFF. NAVAL RES.	U.S. GEOL SURV.	MNRSL MNGMT SERV.	NATL OCEAN ATMOS	DEPT OF ENRGY	OTHER FEDER FUNDS	STATE OR MUNIC	PRIV/ FORGN FUNDS	TOTALS -----
UNIV. HAWAII	216.00	.00	.00	.00	.00	.00	.00	12.00	33.00	261.00
UNIV. ALASKA	186.00	.00	.00	.00	.00	.00	.00	2.00	.00	188.00
UNIV. WASHINGTON	332.39	33.58	2.00	.00	.00	.00	1.00	16.00	.00	384.97
SCRIPPS INST. OCEAN	688.00	49.50	.00	.00	.00	24.00	.00	71.50	13.00	826.00
TEXAS A&M UNIV.	258.00	3.00	.00	.00	.00	.00	.00	50.00	.00	311.00
UNIV. TEXAS	.00	.00	.00	.00	.00	.00	.00	10.00	4.00	14.00
UNIV. MIAMI, RSMAS	325.00	15.00	.00	.00	.00	.00	.00	.00	.00	340.00
UNIV GA., SKIDAWAY	41.00	.00	.00	.00	.00	97.00	.00	.00	.00	138.00
DUKE UNIV/UNC	131.00	.00	.00	26.00	.00	.00	.00	13.00	.00	170.00
JOHNS HOPKINS UNIV.	125.00	.00	.00	.00	.00	.00	.00	.00	.00	125.00
UNIV. DELAWARE	106.00	13.00	.00	.00	.00	.00	.00	.00	31.00	150.00
LAMONT-DOHERTY GEOL	255.00	32.00	.00	.00	.00	.00	.00	.00	.00	287.00
UNIV. RHODE ISLAND	203.00	26.00	.00	.00	.00	.00	7.00	.00	.00	236.00
WOODS HOLE OCEAN	363.00	178.00	5.00	.00	.00	.00	.00	11.00	36.00	593.00
UNIV. MICHIGAN	57.00	.00	.00	.00	2.00	.00	2.50	8.50	.00	70.00
MOSS LANDING MAR LAB	137.00	14.00	.00	.00	.00	.00	.00	14.00	.00	165.00
*****										
TOTALS	3403.39	364.08	7.00	26.00	2.00	121.00	10.50	208.00	117.00	4258.97
PERCENT	79.9	8.5	.2	.6	.0	2.8	.2	4.9	2.7	100.0

UNOLS RESEARCH VESSELS FLEET OPERATIONS - 1986 -

OPERATIONAL DAYS CHARGED BY SPONSOR

08/08/87

VESSEL	LOA	NATL SCI. FNDTN	OFF. NAVAL RES.	U.S. GEOL SURV.	MNRSL MNGMT SERV.	NATL OCEAN ATMOS	DEPT OF ENRGY	OTHER FEDER FUNDS	STATE OR MUNIC	PRIV/ FORGN FUNDS	TOTALS -----
MELVILLE	245FT	207.00	9.50	.00	.00	.00	.00	.00	11.50	13.00	241.00
KNORR	245FT	76.00	85.00	.00	.00	.00	.00	.00	.00	.00	161.00
ATLANTIS II	210FT	168.00	11.00	.00	.00	.00	.00	.00	.00	36.00	215.00
CONRAD	209FT	255.00	32.00	.00	.00	.00	.00	.00	.00	.00	287.00
T.G. THOMPSON	209FT	213.39	33.58	.00	.00	.00	.00	.00	.00	.00	246.97
T. WASHINGTON	209FT	195.00	1.00	.00	.00	.00	.00	.00	4.00	.00	200.00
ENDEAVOR	177FT	203.00	26.00	.00	.00	.00	.00	7.00	.00	.00	236.00
OCEANUS	177FT	119.00	82.00	5.00	.00	.00	.00	.00	11.00	.00	217.00
GYRE	174FT	258.00	3.00	.00	.00	.00	.00	.00	50.00	.00	311.00
MOANA WAVE	210FT	216.00	.00	.00	.00	.00	.00	.00	12.00	33.00	261.00
ISELIN	170FT	175.00	2.00	.00	.00	.00	.00	.00	.00	.00	177.00
NEW HORIZON	170FT	158.00	14.00	.00	.00	.00	17.00	.00	47.00	.00	236.00
FRED H. MOORE	165FT	.00	.00	.00	.00	.00	.00	.00	10.00	4.00	14.00
CAPE FLORIDA	135FT	20.00	.00	.00	.00	.00	.00	.00	.00	.00	20.00
POINT SUR	135FT	137.00	14.00	.00	.00	.00	.00	.00	10.00	.00	161.00
CAPE HATTERAS	135FT	131.00	.00	.00	26.00	.00	.00	.00	13.00	.00	170.00
ALPHA HELIX	133FT	186.00	.00	.00	.00	.00	.00	.00	2.00	.00	188.00
ROBERT G. SPROUL	125FT	108.00	25.00	.00	.00	.00	7.00	.00	9.00	.00	149.00
CAPE HENLOPEN	120FT	106.00	13.00	.00	.00	.00	.00	.00	.00	31.00	150.00
WARFIELD	106FT	125.00	.00	.00	.00	.00	.00	.00	.00	.00	125.00
CAYUSE	80FT	.00	.00	.00	.00	.00	.00	.00	4.00	.00	4.00
BLUE FIN	72FT	41.00	.00	.00	.00	.00	97.00	.00	.00	.00	138.00
CLIFFORD BARNES	65FT	119.00	.00	2.00	.00	.00	.00	1.00	16.00	.00	138.00
CALANUS	64FT	130.00	13.00	.00	.00	.00	.00	.00	.00	.00	143.00
LAURENTIAN	80FT	57.00	.00	.00	.00	2.00	.00	2.50	8.50	.00	70.00
*****											
TOTALS		3403.39	364.08	7.00	26.00	2.00	121.00	10.50	208.00	117.00	4258.97
PERCENT		79.9	8.5	.2	.6	.0	2.8	.2	4.9	2.7	100.0

UNOLS RESEARCH VESSELS FLEET OPERATIONS - 1986 -

PROJECT PERSON-DAYS AT SEA BY SPONSOR

08/08/87

VESSEL	LOA	TOTAL DAYS CHRGD	NATL SCI. FNDTN	OFF. NAVAL RES.	U.S. GEOL. SURV.	MNRLS MNGMT SERV.	NATL OCEAN ATMOS	DEPT. OF ENRGY	OTHER FEDER FUNDS	STATE OR MUNIC	PRIV/ FORGN FUNDS	TOTALS -----
MELVILLE	246	241.00	3367.00	161.50	.00	.00	.00	.00	.00	214.50	239.00	3982.00
KNORR	245	161.00	1110.00	1520.00	.00	.00	.00	.00	.00	.00	.00	2630.00
ATLANTIS II	210	215.00	3814.00	352.00	.00	.00	.00	.00	.00	.00	876.00	5042.00
CONRAD	209	267.00	4315.00	512.00	.00	.00	.00	.00	.00	.00	.00	4827.00
T.G. THOMPSON	209	246.97	2872.51	601.81	.00	.00	.00	.00	.00	.00	.00	3474.32
T. WASHINGTON	209	200.00	2265.00	7.00	.00	.00	.00	.00	.00	32.00	.00	2304.00
ENDEAVOR	177	236.00	2498.00	258.00	.00	.00	.00	.00	112.00	.00	.00	2868.00
OCEANUS	177	217.00	967.00	784.00	60.00	.00	.00	.00	.00	112.00	.00	1923.00
GYRE	174	311.00	2085.00	48.00	.00	.00	.00	.00	.00	766.00	.00	2899.00
MOANA WAVE	210	261.00	3696.00	.00	.00	.00	.00	.00	.00	245.00	608.00	4549.00
ISELIN	170	177.00	2507.00	26.00	.00	.00	.00	.00	.00	.00	.00	2533.00
NEW HORIZON	170	236.00	1807.00	156.00	.00	.00	.00	226.00	.00	543.00	.00	2732.00
FRED H. MOORE	165	14.00	.00	.00	.00	.00	.00	.00	.00	180.00	120.00	300.00
CAPE FLORIDA	135	20.00	242.00	.00	.00	.00	.00	.00	.00	.00	.00	242.00
POINT SUR	135	161.00	1443.00	131.00	.00	.00	.00	.00	.00	208.00	.00	1782.00
CAPE HATTERAS	135	170.00	1461.00	.00	.00	294.00	.00	.00	.00	180.00	.00	1935.00
ALPHA HELIX	133	188.00	1874.00	.00	.00	.00	.00	.00	.00	28.00	.00	1902.00
ROBERT G. SPROUL	125	149.00	1663.00	168.00	.00	.00	.00	84.00	.00	47.00	.00	1962.00
CAPE HENLOPEN	120	150.00	915.00	117.00	.00	.00	.00	.00	.00	.00	162.00	1194.00
WARFIELD	106	125.00	734.00	.00	.00	.00	.00	.00	.00	.00	.00	734.00
CAYUSE	080	4.00	.00	.00	.00	.00	.00	.00	.00	44.00	.00	44.00
BLUE FIN	072	136.00	72.00	.00	.00	.00	.00	365.00	.00	.00	.00	437.00
CLIFFORD BARNES	065	136.00	544.00	.00	7.00	.00	.00	.00	2.00	513.00	.00	1066.00
CALANUS	064	143.00	794.00	57.00	.00	.00	.00	.00	.00	.00	.00	851.00
LAURENTIAN	060	70.00	267.00	.00	.00	.00	36.00	.00	10.00	118.00	.00	431.00
*****												
TOTALS		4258.97	41312.51	4899.31	67.00	294.00	36.00	675.00	124.00	3230.50	2005.00	52643.32
PERCENT			78.5	9.3	.1	.6	.1	1.3	.2	6.1	3.8	100.0



## UNOLS CRUISE PARTICIPANTS AND AFFILIATIONS

08/08/87

SHIP	SCI	TECH	GRAD	STU/OBS	TOTAL	ASSOC	NON-UNOLS	FED	FRGN	TOTAL
MOANA WAVE	83	101	70	20	274	4	7	3	9	23
ALPHA HELIX	57	45	38	13	153	11	17	1	9	38
T.G. THOMPSON	58	66	40	11	175	8	6	7	11	32
CLIFFORD BARNES	52	99	87	203	441	4	6	13	2	25
MELVILLE	30	67	25	16	138	35	12	5	6	58
ROBERT G. SPROUL	75	88	51	29	243	49	12	12	12	85
NEW HORIZON	79	111	66	16	272	107	2	8	1	118
T. WASHINGTON	38	47	19	9	113	14	2	0	29	45
GYRE	43	64	29	19	155	42	18	5	5	70
ISELIN	62	65	50	30	207	38	16	6	1	61
CAPE FLORIDA	5	11	7	0	23	0	2	0	1	3
FRED H. MOORE	3	6	0	33	42	0	0	0	0	0
CALANUS	28	19	21	4	72	12	12	2	1	27
BLUE FIN	57	81	27	12	177	5	4	1	0	10
CAPE HATTERAS	116	74	57	34	281	96	28	4	7	135
WARFIELD	58	118	25	63	264	53	30	9	0	92
CAPE HENLOPEN	45	67	70	22	204	11	28	0	0	39
CONRAD	70	88	13	4	175	0	21	2	7	30
ENDEAVOR	128	33	1	8	170	11	2	0	0	13
ATLANTIS II	82	146	19	33	280	16	43	6	19	84
KNORR	69	74	17	20	180	20	10	3	1	34
OCEANUS	75	55	18	5	153	21	19	10	29	79
LAURENTIAN	44	52	23	31	150	0	0	0	0	0
CAYUSE	8	0	0	3	11	0	10	1	0	11
POINT SUR	67	60	87	107	321	80	59	10	0	149
*****										
TOTALS	1432	1637	860	745	4674	637	366	108	150	1261
PERCENT	30.6	35.0	18.4	15.9	100.0	13.6	7.8	2.3	3.2	27.0

## UNOLS FLEET IMPROVEMENT COMMITTEE

### Objectives:

1. Amplify and update the UNOLS Fleet Improvement Plan.  
This will require continuing reassessment of number and mix of ships, required sources, program planning, vessel availability, results of committee studies, and so forth.
2. Continue to refine science mission requirements, including specifically the roles and requirements for smaller vessels and innovative platforms.
3. Initiate and carry through concept design studies for smaller vessels
4. Consider alternatives to new construction for meeting science mission requirements.
  - a) Refits and improvements to existing UNOLS vessels may render them more capable and economical, and extend their service life.
  - b) There are numerous relatively new vessels in the merchant fleet which might be converted to form one or more classes of research vessels. Many of these are owned by the Federal government.
5. Carry two of the new conceptual designs for large vessels into more detailed design phases (perhaps full preliminary design).
6. Serve as liaison activity and information source for Federal agency representatives working on matters of planning or funding for new construction and upgrading of UNOLS vessels.

10 October 1987

## **UNOLS FLEET IMPROVEMENT COMMITTEE**

Dr. Richard Barber	Duke University Marine Lab
Cptn. R. P. Dinsmore	Woods Hole Ocean. Instit.
Dr. Donn Gorsline	University of Southern Calif.
Dr. Marcus Langseth	Lamont-Doherty Geol. Obser.
Dr. James Murray	University of Washington
Dr. Worth Nowlin (Ch.)	Texas A&M University
Dr. Bruce H. Robison	Univ. of Calif., Santa Barbara
Dr. Fred Spiess	Univ. of Calif., San Diego
Cptn. T. K. Treadwell (Ex. Sec.)	Texas A&M University

10 October 1987

## Specific FIC Activities

Two **updates of the Fleet Improvement Plan**: 1 major, 1 minor.

**Continuing review of agency plans** to determine whether the planned fleet capability is well matched with the planned science; discussions with, and recommendations to, agencies concerning these capabilities.

Provide specific advice to government agencies as requested.

Follow up on Fleet Replacement Committee work **concerning large vessels**, both in design studies and by **advice during construction or modernization**.

Study and report on adequacy of past ship conversions, and **evaluate suitability of surplus Federal vessels for conversion to research vessels**

Develop **new science mission requirements** for the following types of ships:

- small, general-purpose research vessel
- intermediate, general-purpose research vessel
- stable, deep-ocean research platform
- small, ice-capable research vessel

**Refine science mission requirements** for vessel classes prepared by Fleet Replacement Committee, including **multichannel seismic capabilities**

Investigate the **scientific need for, and research potential of**, the following:

- various **innovative platforms**
- **research submarine**

Carry out **concept design studies** for the following:

- small, general-purpose research vessel
- intermediate size SWATH
- innovative (deep-ocean, stable) platform
- small, ice-capable research vessel



Study (in collaboration with other UNOLS groups) possible improvements to the system for evaluation of cruises and ship performance by researchers.

Study **potential improvements to existing intermediate research vessels and CAPE-class vessels** for future refits and modifications

Study (in collaboration with appropriate UNOLS groups) possible improvements in ship scheduling, with particular reference to the use of computers and telecommunications.

Evaluate alternatives to federal funding for construction/or conversion of research vessels.

In addition to the foregoing specific tasks, the committee will work with individuals and institutions to obtain required funding for, and will provide oversight for, the following tasks:

**Plans for improvements to existing intermediate research vessels**

**Plans for improvements (including possible stretching) to CAPE class research vessels**

**Preliminary design study for large monohull research vessel, and perhaps for an intermediate SWATH vessel or others.**

10 October 1987

ONR-NSF RESEARCH FLEET POLICY DISCUSSION

PURPOSE

THE PURPOSE OF THE DISCUSSION IS TO ESTABLISH A FRAMEWORK AND SET OF GUIDELINES FOR THE EFFECTIVE COORDINATION OF THE NSF AND ONR RESEARCH FLEET-SUPPORT ACTIVITIES.

## ONR-NSF RESEARCH FLEET POLICY DISCUSSION

### BACKGROUND

- THE NATIONAL SCIENCE FOUNDATION AND THE OFFICE OF NAVAL RESEARCH ARE THE KEY FEDERAL AGENCIES SUPPORTING SHIP OPERATIONS, MODERNIZATION OF EXISTING RESEARCH SHIPS, AND NEW SHIP CONSTRUCTION.
- A MODERN, EFFICIENT AND EFFECTIVE ACADEMIC FLEET IS ESSENTIAL FOR PRODUCTIVE FIELD PROGRAMS IN THE OCEAN SCIENCES. BOTH NSF AND ONR MAINTAIN GLOBAL RESEARCH PROGRAMS THAT REQUIRE EXTENDED OPERATIONAL AND SCIENTIFIC CAPABILITIES.
- A UNIFIED APPROACH TO SCHEDULING, OPERATIONS, MAINTENANCE, MODERNIZATION AND REPLACEMENT OF THE ACADEMIC RESEARCH SHIPS IS REQUIRED TO MEET THE EMERGING NATIONAL NEEDS FOR SEA-GOING OCEAN SCIENCE RESEARCH.

## ONR-NSF RESEARCH FLEET POLICY DISCUSSION

### GOAL

ESTABLISH A SET OF GUIDELINES AND IMPLEMENTATION PROCEDURES. CANDIDATE TOPICS:

- PLANNING AND FUNDING OF RESEARCH VESSEL OPERATIONS INCLUDING SCHEDULING, SCIENTIFIC OUTFITTING, SHORE-BASED SUPPORT AND MARINE TECHNICIAN SERVICES.
- PLANNING AND FUNDING OF RESEARCH VESSEL LAYUPS, IF REQUIRED.
- PLANNING AND ESTABLISHMENT OF OVERALL SIZE OF ACADEMIC RESEARCH FLEET AND ASSIGNMENTS (AND REASSIGNMENTS) OF VESSELS.
- PLANNING AND FUNDING OF CONSTRUCTION, MODIFICATION AND/OR OVERHAUL OF MAJOR RESEARCH VESSELS.
- PLANNING AND FUNDING OF SPECIAL NEEDS IN ACADEMIC RESEARCH FLEET, SUCH AS ARCTIC RESEARCH VESSEL, ALVIN, RESEARCH AIRCRAFT, ETC.



ONR-NSF RESEARCH FLEET POLICY DISCUSSION

INITIAL THOUGHTS

- THE "ACADEMIC RESEARCH FLEET" WILL BE DEFINED TO INCLUDE UNOLS AND OTHER VESSELS AS THE SCIENCE REQUIRES. SMALL CRAFT/"MOTOR BOATS" WILL NOT BE INCLUDED IN THIS DEFINITION.
- ONR AND NSF WILL CONTINUE TO DEAL WITH NEW CONSTRUCTION AND CONVERSIONS JOINTLY FOR OPTIMUM RENEWAL OF THE RESOURCES OF THE ACADEMIC FLEET.
- ONR AND NSF HAVE AGREED TO ARRIVE AT CONSISTENT GUIDELINES FOR DEALING WITH DEADHEAD SHIP TRANSIT TIME COSTS AND ANY LAYUPS.
- ALVIN IS A SUCCESSFUL MODEL FOR MANAGEMENT OF SPECIAL FACILITIES. IT WILL BE USED AS A POINT OF DEPARTURE FOR MANAGEMENT OF ANY OTHER UNIQUE FACILITIES CONSIDERED BY THE AGENCIES.

## ONR-NSF RESEARCH FLEET POLICY DISCUSSION

### BASIC PRECEPTS

- ONR AND NSF ARE COMMITTED TO A JOINT AGENCY AND UNIFIED APPROACH. THIS IS THE CENTRAL POINT OF THESE DISCUSSIONS.
- UNOLS IS A KEYSTONE TO AN EFFECTIVE AND PRODUCTIVE ACADEMIC RESEARCH. NO CHANGE IN UNOLS ROLE IS ANTICIPATED.

ONR-NSF RESEARCH FLEET POLICY DISCUSSION

WORKING TEAM:

FACILITIES -- HEINRICHS (NSF); SILVA (ONR)

SCIENCE -- REEVE (NSF); HARTWIG (ONR)

\* \* \* \* \*

INITIAL DRAFT:

WORKING PAPERS BY 15 AUGUST

# **JOINT RESEARCH SHIP POLICY**

Office of Naval Research

National Science Foundation

## **Policy Elements:**

- **Define a Fleet**
- **Ship Scheduling Guidelines**
- **Mechanisms for Handling Transit Costs**
- **Joint Maintenance Agreement**
- **Lay-Up Costs**
- **Coord. for Fleet Replacements**
- **Handling of Other Facilities**



# **JOINT RESEARCH SHIP POLICY**

Office of Naval Research

National Science Foundation

## **Policy Statement**

**The Office of Naval Research (ONR) and the National Science Foundation (NSF), "the Agencies", have as a joint objective the goal of providing a safe and efficient academic research fleet for the conduct of oceanographic research.**



# United States Department of the Interior

MINERALS MANAGEMENT SERVICE  
WASHINGTON, DC 20240

## MINERALS MANAGEMENT SERVICE ENVIRONMENTAL PROGRAM

### TO THE UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM:

MINERALS MANAGEMENT SERVICE ENVIRONMENTAL STUDIES ARE AWARDED IN THE FORM OF CONTRACTS, USUALLY BY COMPETITIVE PROCUREMENT, TO PRIVATE COMPANIES OR, IN A FEW CASES, AS INTERAGENCY AGREEMENTS TO OTHER FEDERAL AGENCIES. THE COORDINATION AND DIRECTION OF RESEARCH VESSELS FOR STUDIES IS CONDUCTED AS A FUNCTION OF EACH REGIONAL OCS OFFICE. THE SELECTION OF THE VESSEL AND THE VENDOR IS SELECTED AT THE PROJECT LEVEL AT THE REGIONAL LEVEL. COORDINATED USE OF A GIVEN VESSEL BY MULTIPLE VENDORS IS THE RESPONSIBILITY OF THE REGIONAL OFFICE. COST SHARING FOR SHIPTIME WITH OTHER FEDERAL AGENCIES IS ON GOING.

THE FISCAL YEAR 1987 THE ENVIRONMENTAL STUDIES PROGRAM BUDGET WAS \$22,629,200. THE PROPOSED ENVIRONMENTAL STUDIES FUNDING FOR FY88 IS ABOUT \$22,000,000. THE PROPOSED REGIONAL FUNDING DISTRIBUTIONS ARE:

REGION	OFFICE LOCATION	FUNDING
ALASKA	ANCHORAGE, ALASKA	7,000,000.
ATLANTIC	VIENNA, VIRGINIA	800,000.
GULF OF MEXICO	METAIRIE, LOUISIANA	4,500,000.
PACIFIC	LOS ANGELES, CALIFORNIA	8,300,000.

WASHINGTON OFFICE SUPPORT OF NATIONAL STUDIES 1,400,000.

REGIONAL STUDIES REQUIRING RESEARCH VESSELS INCLUDE PHYSICAL OCEANOGRAPHY AND BIOLOGICAL PROJECTS THROUGHOUT THE REGIONS. INFORMATION ON INDIVIDUAL STUDIES PROPOSED IS PROVIDED IN THE REGIONAL STUDIES PLANS PREPARED ANNUALLY BY EACH REGIONAL OFFICE.

QUESTIONS CONCERNING THE ENVIRONMENTAL STUDIES PROGRAM SHOULD BE DIRECTED TO DR. DON AURAND, CHIEF, BRANCH OF ENVIRONMENTAL STUDIES AT (202) 343-7744.

SUMMARY OF 1986 CLEARANCE RESULTS

	<u>SHIP</u>	<u>COUNTRY(S)</u>	<u>RESEARCH PERIOD</u>
86-01	SPROUL	Mexico <sup>1</sup>	July - August 1986
86-02	WESTWARD	Bahamas U.K. (Bermuda)	April - May 1986
86-03	ALBATROSS IV	Canada	March - May 1986
86-04	MOANA WAVE	Federated States <sup>2</sup> of Micronesia	January - February 1986
86-05	KILA	Republic of Kiribati <sup>3</sup>	February - March 1986
86-06	CONRAD	Sri Lanka	June - July 1986
86-07	T. WASHINGTON <sup>4</sup>	PRC Republic of S. Korea	June - July 1986
86-08	MSR (Spieler)	Mexico	March - April 1986
86-09	SEDCO/BP 471	Mauritania <sup>5</sup>	February - April 1986
86-10	PACIFIC STATES I (Charter)	Mexico <sup>6</sup>	September - October 1986
86-11	OREGON II	Mexico <sup>7</sup>	August - September 1986
86-12	LYNCH	Algeria <sup>8</sup>	April - May 1986
86-13	SOCIETY EXPLORER	USSR <sup>9</sup>	July - August 1986
86-14	DELAWARE II	Canada	May - June 1986
86-15	T. WASHINGTON	Japan	May 1986
86-16	LYNCH <sup>10</sup>	Spain Morocco	March - April 1986
86-17	WHITING	Bahamas	April - June 1986
86-18	KNORR	Black Sea <sup>11</sup>	Summer 1987
86-19	WESTWARD	Canada	May - July 1986
86-20	ENDEAVOR	Spain	October 1986
86-21	GYRE	Venezuela <sup>12</sup>	January 1987

86-22	SEDCO/BP 471	France (Martinique) Barbados	June - August 1986
86-23	RESEARCHER	Brazil <sup>13</sup>	August - September 1986
86-24	THOMPSON	Canada	March - April 1986
86-25	D.S. JORDAN <sup>14</sup> MCARTHUR	Mexico Costa Rica Guatemala France (Clipperton Is.) Panama Colombia Ecuador Peru	July - December 1986
86-26	GLORIA MICHELLE	Canada	April 1986
86-27	EDWIN LINK	Canada	July - August 1986
86-28	HYDROGRAPHIC SURVEY (St. Lawrence River)	Canada	May - October 1986
86-29	POLAR DUKE	Chile	September - October 1986
86-30	HYDROGRAPHIC SURVEY (St. Mary's River)	Canada	May - October 1986
86-31	J.W. POWELL	France (Martinique, Guadeloupe) Dominica St. Lucia St. Vincent Grenada Barbados	April - August 1986
86-32	HARKNESS CHAUVENET	Somalia	July 1986-July 1987
86-33	COLLECTION PERMIT (Savitzky)	Mexico	June - July 1986
86-34	ALBATROSS IV	Canada	June - July 1986
86-35	GYRE	Canada	May 1986
86-36	GYRE	Canada	June - July 1986



86-37	GYRE	Canada	August 1986
86-38	GYRE	Canada	August - September 1986
86-39	SOCIETY EXPLORER <sup>15</sup>	Mexico Nicaragua El Salvador Honduras Costa Rica Panama Colombia Bonaire Grenada Barbados	September 1986
86-40	COLUMBUS ISELIN	U.K. (Bermuda) Bahamas	August 1986
86-41	CAPE HENLOPEN	Canada	August 1986
86-42	JOHN ISAACS	Mexico <sup>16</sup>	May - June 1987
86-43	GYRE	Canada	May - June 1986
86-44	COLUMBUS ISELIN <sup>17</sup>	France (Martinique) St. Lucia St. Vincent Trinidad-Tobago	July - August 1986
86-45	CAPE HATTERAS	U.K. (Bermuda) Canada	June-July 1986
86-46	NEW HORIZON <sup>18</sup>	Mexico	December 1986
86-47	SEWARD JOHNSON	Canada	July - August 1986
86-48	LYNCH <sup>19</sup>	Algeria Spain	May - June 1986
86-49	JOHN ISAACS	Canada	August - September 1986
86-50	SEWARD JOHNSON	Panama Ecuador Costa Rica	November - December 1986
86-51	KATMAI BAY (Charter)	Canada	August - September 1986
86-52	EDWIN LINK	Canada	August 1986
86-53	MILLER FREEMAN	Canada	June - July 1986
86-54	NOAA AIRCRAFT (Hurricane Research)	Mexico	September - October 1986

86-55	WESTWARD	Canada	July - August 1986
86-56	DELAWARE II	Canada	August - September 1986
86-57	SEWARD JOHNSON	Canada	September 1986
86-58	DELAWARE II	Canada	July - August 1986
86-59	JOHN ISAACS	Mexico <sup>20</sup>	November 1986
86-60	SEDCO/BP 471	Peru	October - December 1986
86-61	FRANKLIN (Charter)	Canada <sup>21</sup> Denmark (Greenland)	September 1986
86-62	BERNARD (Brazilian)	Brazil <sup>22</sup>	January - April 1987
86-63	LYNCH <sup>23</sup>	Spain Morocco	June 1986
86-64	MOANA WAVE	Mexico	April - May 1987
86-65	MMR (Malmquist)	Mexico	February - May 1987
86-66	THOMPSON	Canada	August - September 1986
86-67	BARTLETT	Honduras	September - December 1986
86-68	OCEANOGRAPHER	Peru France (Clipperton Is.)	November - December 1986
86-69	MMR (Tershy)	Mexico	December 1986 - June 1987
86-70	CONRAD	Brazil	January 1987
86-71	LYNCH	Spain <sup>24</sup> Morocco	September - October 1986
86-72	ATLANTUS II/ ALVIN	Panama	November - December 1986
86-73	NEREID (Charter) SEAFARER (Charter)	Canada	July - October 1986
86-74	MMR (Cole)	Mexico	February 1987
86-75	BARNES	Canada	August - September 1986
86-76	T. WASHINGTON	Japan	July - August 1986
86-77	BARNES	Canada	July 1986
86-78	EDISON CHOUEST (Charter)	Mexico <sup>25</sup>	January - October 1987

86-79	MSR (Ryan)	Mexico	January - September 1987
86-80	ALTAIR (Mexican vessel)	Venezuela <sup>26</sup>	September - November 1986
86-81	ALBATROSS IV	Canada	September - November 1986
86-82	RESEARCHER	Bahamas UK (Turks & Caicos Montserrat) Haiti Dominican Republic Antigua and Barbados St. Kitts/Nevis France (Martinique, Guadeloupe) Netherlands Antilles Dominica St. Lucia St. Vincent Grenada Barbados Trinidad & Tobago <sup>27</sup> Venezuela <sup>28</sup>	October - November 1986
86-83	LYNCH	Norway	August - September 1986
86-84	NOAA Aircraft (EMEX Project)	Indonesia	January - February 1987
86-85	SPROUL	Mexico	April - May 1987
86-86	STARELLA (U.K. Vessel)	U.K. (Anguilla, BVI, Montserrat) Antigua and Barbuda St. Kitts/Nevis Netherlands Antilles France (Martinique, Guadeloupe) <sup>29</sup> Dominica St. Lucia St. Vincent Grenada Barbados	September - October 1986
86-87	SPROUL <sup>30</sup>	Ecuador	February - March 1987
86-88	T. WASHINGTON	Republic of Kiribati	February - March 1987
86-89	ATLANTIS II/ ALVIN	Canada <sup>31</sup>	August 1986

86-90	WESTWARD	U.K. (Montserrat) Antigua and Barbuda St. Kitts/Nevis France (Martinique, Guadeloupe) <sup>32</sup> Dominica St. Lucia St. Vincent Grenada	October - November 1986
86-91	DON JOSE (Mexican Vessel)	Mexico	September - October 1986
86-92	MMR (Dollarhide)	Mexico	January - June 1987
86-93	DELAWARE II	Canada	October 1986
86-94	DELAWARE II	Canada	November - December 1986
86-95	WHITING	Bahamas	October - December 1986
86-96	NOAA AIRCRAFT (EMEX Project)	Papua New Guinea	Dec. '86 - Jan. '87
86-97	NOAA AIRCRAFT (EMEX Project)	Australia	January 1987
86-98	ENDEAVOR	U.K. (Bermuda) <sup>33</sup> Bahamas	October - November 1986
86-99	WESTWARD <sup>34</sup>	Dominican Republic Haiti Antigua & Barbuda St. Kitts/Nevis U.K. (Montserrat) France (Martinique, Guadeloupe) Dominica St. Lucia St. Vincent Grenada Venezuela Jamaica Colombia Honduras Bonaire Mexico	Nov. 1986 - Jan. 1987
86-100	FRI (Charter)	Canada	September 1986

86-101	STARELLA (U.K. Vessel)	Jamaica U.K. (Cayman Is.) Honduras Colombia	October - December 1986
86-102	RAMBLER	U.K. (Bermuda)	October - November 1986
86-103	NEW HORIZON <sup>35</sup>	Mexico	March - May 1987
86-104	MOANA WAVE	Republic of Kiribati Cook Is.	February - March 1987
86-105	DELAWARE II	Canada	January - February 1987
86-106	COLLECTION PERMIT (Hews)	Mexico <sup>36</sup>	Dec. 1986 - Jan. 1988
86-107	RESEARCHER	Bahamas <sup>37</sup>	September 1986
86-108	WESTWIND <sup>38</sup> (Charter)	Mexico	Dec. 1986 - Dec. 1987
86-109	G.W. Pierce (Charter)	Spain <sup>39</sup>	September - October 1986
86-110	CONRAD	Argentina	March - April 1987
86-111	CONRAD	Argentina	April - May 1987
86-112	OCEANUS	Canada	February 1987
86-113	MOANA WAVE	Ecuador	September - October 1987
86-114	TOWNSEND CROMWELL	Kiribati France (Fr. Polynesia) Cook Is. Niue Tokelau	January - March 1987
86-115	T. WASHINGTON	France (Marquesa Is.)	April 1987
86-116	CAPE HATTERAS	Honduras Jamaica Colombia	March - April 1987
86-117	COLUMBUS ISELIN <sup>40</sup>	France Spain	January - March 1987
86-118	LYNCH	Morocco	November - December 1986



86-119	BARTLETT	Panama	November - December 1986
86-120	ALBATROSS IV	Canada	December 1986
86-121	FRED H. MOORE <sup>41</sup>	Costa Rica	April 1987
86-122	CONRAD	Brazil	June - July 1987
86-123	ENDEAVOR	Bahamas	February 1987
86-124	STARELLA <sup>42</sup> (U.K. Vessel)	Cape Verde Spain Portugal France	May - July 1987
86-125	CHAPMAN	Mexico <sup>43</sup>	May - July 1987
86-126	WESTWARD	Bahamas Haiti Jamaica Honduras Belize <sup>44</sup> Mexico <sup>45</sup> U.K. (Cayman Is.) Colombia	February - March 1987
86-127	MOANA WAVE	Western Samoa Fiji Vanuata Solomon Is.	January 1987
86-128	T. WASHINGTON	Kiribati Cook Is.	April - June 1987
86-129	COLLECTION PERMIT (Aldredge)	Mexico <sup>46</sup>	March 1987 - March 1988
86-130	POLAR DUKE	Chile	May 1987
86-131	STARELLA (U.K. Vessel)	Haiti <sup>47</sup>	January 1987
86-132	NAI'A II (Charter)	Mexico <sup>48</sup>	April - May 1987
86-133	DELAWARE II ALBATROSS IV	Canada	February 1987

86-134	OCEANOGRAPHER	France (Fr. Polynesia) Australia Kiribati Nauru Papua New Guinea Solomon Is. Tokelau Tuvalu Vanuatu Western Samoa	June - July 1987
86-135	WHITING	Bahamas	February - April 1987
86-136	THOMPSON	USSR <sup>49</sup>	July - September 1987
86-137	MOANA WAVE	Peru Chile	August 1987
86-138	SEDCO/BP 471 <sup>50</sup>	U.K. (So. Georgia Is.)	March - May 1987
86-139	MOANA WAVE	Peru	July 1987
86-140	CORAL REEF II <sup>51</sup>	Bahamas	January 1987
86-141	ARCHAEOLOGICAL RESEARCH (Tourtellot)	Mexico	June 1987 - May 988

The following general problems, which result in additional work for institutions and the Department of State, should be avoided to save time and avoid problems in our efforts to secure the required clearances.

1) Most importantly, assure that all persons involved in the clearance procedures are familiar with and comply with the UNOLS, "Handbook for International Operations of U.S. Scientific Research Vessels." Failure to do so will predictably cause problems in the clearance procedures.

2) All requests for clearances should comply with NTRVO #67, Appendix D - UNOLS Handbook. Many requests received do not include full information required to implement a clearance request. See also Parts 7 & 8 - UNOLS Handbook. Much time is spent in having to go back to the originator for this information.

3) Lack of adequate lead-time. Many requestors mistakenly think they have complied with lead-time requirements if a clearance request is mailed within the time requested by a coastal state. NTRVO #68, Appendix F - UNOLS Handbook clearly indicates the need for an additional month for processing and to allow Embassies to prepare diplomatic notes requesting clearances. Because of the large number of requests being received, this time is necessary more now than ever before. It is the responsibility of Institutions and R/V operators to ensure that appropriate lead-time is provided.

4) Lack of timely response to requests for additional information creates a timing problem for clearances. It is important to provide this information as soon as possible, because the coastal state usually holds up consideration of a request until the information is provided.

5) If a response from a foreign government is required by a certain date prior to commencing research, that date should be stated in the request. Many coastal states, by design, hold off approvals until immediately prior to commencing research. If an earlier determination is required or an alternative plan must be pursued, this information should be provided at the outset to the coastal state. This may not elicit an early response from the coastal state but at least it will prepare them for a cancellation if it is necessary to fall back to a contingency research plan not requiring their approval. If R/V operators become alarmed by not receiving information regarding requests, they should call for an update or to request a status check from the coastal state.

6) Many, some seemingly unnecessary, schedule changes have been very disruptive in terms of impact on clearance requests and additional work for this office and our Embassies. Please consider the effect on a clearance request for changes within the control of

the institution. This does not, of course, include changes necessitated by bad weather or ship mechanical problems. Any request for schedule changes must be in writing and accompanied by satisfactory explanation of circumstances requiring the change. Do not make changes before checking with the Department of State regarding its impact on the clearance. Please see Part 9 - UNOLS Handbook.

7) Our office is coming to terms again in dealing with overdue post cruise obligations. Present policy is to withhold processing clearance requests from institutions whose scientists are overdue in providing post cruise obligations to foreign coastal states. It is our hope that no disruption in processing will result. Copies of approval memos are provided to R/V operators so that they may track these obligations. See Part 11 (eleven) - UNOLS Handbook.

As indicated above, these problems in themselves may affect the outcome of a clearance, in addition to creating more work. Several of these problems together could result in approval not being granted on a timely basis. Please work to support our efforts to acquire clearances for U.S. research.

BEGINNING IN 1988, OUR OFFICE WILL NO LONGER ACCEPT REQUESTS WHICH ARE NOT TOTALLY IN COMPLIANCE WITH THE UNOLS HANDBOOK.

The following footnotes indicate specific problems or unusual circumstances regarding the requests received during 1986:

- 1) Approval received day of departure.
- 2) Request submitted after vessel began research without approval. Approved with conditions at conclusion of research.
- 3) Request submitted with less than 30 days lead time. Rep. of Kiribati approved but complained of short lead time.
- 4) Extremely troublesome and time consuming clearance request. Problems encountered too numerous and sensitive to mention here.
- 5) Clearance procedure complicated by late submission of request.
- 6) Research cancelled when approval was not received 5 days after planned start of research.
- 7) Research rescheduled when approval was not received 2 days after planned start of research.
- 8) Not approved. Request made without 6 month required lead time.
- 9) Request denied.
- 10) Request submitted with one month lead time. Approved.
- 11) Preliminary clearance request. No action taken, however, advice was provided. Project later scheduled for 1988.
- 12) Research cancelled after ship waited a week for clearance in Venezuela.
- 13) Request approved, however, authorization was cancelled when Brazilian Naval Observers missed ship.
- 14) Extremely troublesome and time consuming clearance owing to late submission of request and many schedule changes. Approvals received by all but Mexico.
- 15) Request cancelled when Mexican clearance could not be assured early enough.
- 16) Approval received just prior to departure, after several schedule changes.
- 17) Request submitted inside French 4 month lead time requirement, however, approval was given. Conditions of Trinidad Tobago approval were unacceptable.



- 18) Research was cancelled, however, Mexico approval was given and participants showed up after initial scheduled departure time.
- 19) Request submitted with one month lead time. Spain approved, Algeria did not.
- 20) Research cancelled when approval was not received after several reschedulings.
- 21) Research conducted aboard Canadian Coast Guard vessel at the request of Canada.
- 22) Research proposed aboard Brazilian vessel was not approved until after proposed survey period. Approved for May to December 1987, however, to date surveys have not begun.
- 23) Request submitted with less than 30 days notice was denied by Spain. Previous two requests were similarly late. Spain reconsidered and allowed survey.
- 24) After 3 straight requests with 30 day notice, (6 months required) request made with 3 months notice. Denied by Spain, however, later approved as a special exception to 6 month requirement.
- 25) Research cancelled after numerous reschedulings owing to late approvals.
- 26) Research cancelled due to lack of funding.
- 27) Request denied.
- 28) No response to request.
- 29) No surveys allowed inside 12 mile territorial sea.
- 30) Request cancelled due to lack of funding.
- 31) Request submitted with two week notice was approved by Canada.
- 32) Request denied owing to late submission, however, approved later.
- 33) Request approved by U.K. Foreign and Commonwealth Office, however, local authorities would not allow research.
- 34) Requests denied by France, Venezuela and Mexico owing to late submission. France later allowed research.

- 35) Research cancelled due to lack of funding.
- 36) Request denied.
- 37) Request submitted with 1 week lead time. Approved.
- 38) Request referred to International Boundary and Water Commission.
- 39) Clearance granted on exceptional basis by Spain (lacking 6 month lead time).
- 40) Request submitted without sufficient prior notice, was denied by Spain and France. France later allowed research outside 12 mile territorial sea.
- 41) Ship began research 10 days early without notice after approval.
- 42) Portugal denied request. France wouldn't allow surveys inside 12 mile territorial sea. Spanish surveys also cancelled as a result.
- 43) Request approved 1 day after scheduled start of research.
- 44) Belize did not reply to request.
- 45) Request denied.
- 46) Request denied.
- 47) Not approved; not sufficient notice.
- 48) Request approved one month late.
- 49) Request denied.
- 50) Request not made owing to U.K./Argentina political problems.
- 51) Embassy never submitted request.

TOTAL REQUESTS PER COUNTRY -- 1986

Canada - 39	France - 14
Mexico - 30	United Kingdom - 12
Honduras - 6	Spain - 8
Costa Rica - 4	USSR - 2
Panama - 4	Denmark - 1
Belize - 1	Norway - 1
Guatemala - 1	Morocco - 4
Colombia - 6	Algeria - 2
Peru - 5	Mauritania - 1
Brazil - 4	Rep. of Cape Verde - 1
Ecuador - 4	Sri Lanka - 1
Venezuela - 4	Somalia - 1
Chile - 3	Kiribati - 6
Argentina - 2	Cook Is. - 3
Bahamas - 11	Tonga - 3
Grenada - 6	Australia - 2
St. Lucia - 6	Japan - 2
St. Vincent - 6	Papua New Guinea - 2
Barbados - 5	Solomon Is. - 2
Dominica - 5	Tokelau - 2
Antigua - 4	Vanuatu - 2
Haiti - 4	Western Samoa - 2
Jamaica - 4	Federated States of Micronesia - 1
St. Kitts/Nevis - 4	Fiji - 1
Bonaire - 3	Indonesia - 1
Dominican Republic - 2	Nauru - 1
Netherlands Antilles - 2	Niue - 1
Trinidad - Tobago - 1	PRC - 1
	ROK - 1
	Tuvalu - 1

The Department of State submitted a total of 259 clearance requests to 58 foreign governments during 1986.

Sixteen clearances were denied or otherwise not approved. Research was cancelled, delayed, or otherwise disrupted in 17 other instances owing to non-receipt of timely clearances.

In addition, 23 requests were received from 5 foreign states to conduct research in U.S. waters. All were approved.



# UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

October 1987

## UNOLS NOMINATING COMMITTEE

The Nominating Committee has assembled the following slate of candidates for UNOLS and the Advisory Council positions to be filled at the October, 1987 Annual Meeting.

### THE SLATE

#### For Vice Chairman, UNOLS:

Donald F. Boesch	Louisiana Universities Marine Consortium
Jay Langfelder	Harbor Branch Oceanographic Institution
John Morrison	North Carolina State University

#### For Advisory Council - Member Representation:

Charles Eriksen	University of Washington
Jeff Fox (incumbent)	University of Rhode Island
Tom Johnson	Duke University Marine Laboratory
Art Maxwell (incumbent)	University of Texas, Austin
Rich Pieper	University of Southern California
Carolyn Thoroughgood	University of Delaware

#### For Advisory Council- Associate Member Representation:

Kent Fanning	University of South Florida
Tom Malone	University of Maryland



## VITAE

Donald F. Boesch, Biological Oceanography  
Executive Director  
Louisiana Universities Marine Consortium  
Benthos; crustacea, marine macrophytes, taxonomy and systematics;  
Coastal Zone Management.

Leonard Jay Langfelder, Civil Engineering  
Vice President and Managing Director  
Harbor Branch Oceanographic Institution  
Coastal Zone Processes, Coastal Engineering, Sediment Mechanics.

John Morrison, Physical Oceanography  
Professor of Oceanography  
North Carolina State University  
Currents and circulation; Ocean engineering and instrumentation;  
Computer sciences.

Charles Eriksen, Physical Oceanography  
Associate Professor, School of Oceanography  
University of Washington  
Upper ocean dynamics, equatorial dynamics, and internal waves and  
mixing employing investigations with arrays of moored current  
profilers.

Paul J. Fox, Marine Geology  
Research Professor, Graduate School of Oceanography  
University of Rhode Island  
Marine Geology and Geophysics, Crustal and Plate Dynamics.

Thomas C. Johnson, Marine Geology  
Director, Duke/UNC Oceanographic Consortium  
Associate Professor of Geology, Duke University  
Duke University Marine Laboratory  
Sedimentary processes in large lakes and oceans.

Arthur E. Maxwell, Oceanographer, Geophysicist  
Director, Institute for Geophysics,  
University of Texas, Austin  
Geophysics, currents and circulation; structural geology/tectonics.

Richard E. Pieper, Biological Oceanography  
Research Scientist, University of Southern California  
Zooplankton, Bony fish and elasmobranchs, crustacea, marine mammals;  
Fisheries oceanography.

Carolyn Thoroughgood, Biochemistry  
Dean, College of Marine Sciences  
University of Delaware  
Biochemistry, organic chemistry, molluscs.

Kent Fanning, Chemical Oceanography  
Professor, Marine Science Department  
Chemical Oceanography, interstitial chemistry of sediments, transport  
process across water-sediment interfaces, geochemical processes in  
river plumes, radioisotopes in geothermal plumes.

Thomas Malone, Biological Oceanography  
Professor of Oceanography, University of Maryland (Horn Pt. Labs)  
Population ecology of phytoplankton; food chain dynamics; nutrient  
cycling.