

SUMMARY REPORT OF THE OCTOBER 1982

SEMIANNUAL MEETING

COSMOS CLUB  
2121 MASSACHUSETTS AVENUE N.W.  
WASHINGTON, D.C.

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Summary Report of the UNOLS Meeting

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OCTOBER 1982

Summary Report of Semiannual Meeting

October 15, 1982

Cosmos Club  
2121 Massachusetts Avenue NW  
Washington, D.C.

General: Issues and items considered at the October, 1982 Semiannual Meeting are reported in the order that they were addressed. Unless otherwise noted, all items are from the published agenda (Appendix I).

Before the meeting was formally called to order, the Executive Secretary called to the attention of attendees: registration information and information being distributed from the UNOLS Office, including the Announcement of Research Opportunities in the ALVIN Program, 1984-1985, the current UNOLS Directory and the List of Research Vessels operated by UNOLS Institutions. Registered attendees are listed in Appendix II. The directory and List of Vessels are Appendices III and IV.

Revised summaries of 1981 UNOLS Ship Use (August, 1982) were also distributed (Appendix V).

The UNOLS Semiannual Meeting, October, 1982, was called to order by Chairman Dr. Derek Spencer. He announced that a report on the September, 1982 meeting of the Research Vessel Operators Council would be added to the agenda.

UNOLS Advisory Council Report: Chairman Dr. Bruce Robison noted that his report would emphasize the Advisory Council study and report *Composition, Distribution and Management of the UNOLS Fleet*, because the Council's efforts since the last UNOLS Meeting had been devoted almost exclusively to that study. Before discussing that study, however, other Advisory Council actions were introduced:

*The Advisory Council recommends that the application for Associate Membership from Old Dominion University (Appendix VI) be approved by UNOLS.*

The Council has discussed the issue of orderly replacement of ships now in the UNOLS Fleet. These discussions have been based on the 1978 report *On the Orderly Replacement of the Academic Research Fleet* and recent updates of that report. It was the sense of the Advisory Council that UNOLS should endorse the principle of orderly replacement notwithstanding strictures resulting from current budget levels. To that end, the Council agreed to a resolution for presentation to UNOLS (Appendix VII). This resolution endorses the importance of orderly replacement of the UNOLS fleet and recommends a procedure for defining replacement schedules, immediate initiation of the planning process and an effort to anticipate the future vessel needs of ocean science.

Discussion of the issue of vessel replacement included suggestions that the studies and tasks undertaken should be at the direction of the UNOLS membership rather than through the Advisory Council. The credibility of endorsing vessel replacement concurrently with studies that imply vessel

layups was questioned. An amendment to the Advisory Council resolution was offered by G. Shor that would place the study process more directly within UNOLS membership control. Consideration of the resolution was deferred until the amended version could be written and introduced.

The Advisory Council Study and Report Composition, Distribution and Management of the UNOLS Fleet: The Chairman, Advisory Council, began his presentation on the study and report by citing the National Science Foundation and Office of Naval Research charge to the Council and the Council's acceptance to:

*"...develop specific recommendations on a ship-by-ship basis for the composition, distribution and management of the UNOLS fleet in the 1983-1988 time frame. These recommendations to be based on assessment of existing data, studies and projections for the UNOLS fleet and projections for its future funding."*

This charge was accepted by the Advisory Council on May 23, 1982, and the UNOLS membership was so informed at the Semiannual Meeting May 24, 25, 1982.

*The Advisory Council formally transmitted their final report and Management of the UNOLS Fleet to NSF and ONR on October 14, 1982.*

The Advisory Council's study process to formulate the report included:

1. Notification of the process to the UNOLS membership and solicitation of information, especially from those UNOLS institutions operating ships;
2. An Advisory Council Workshop at which preliminary and member-input information was assessed and a preliminary report and recommendations were drawn;
3. Distribution of the preliminary report with a solicitation of member comments and additional information;
4. A second Advisory Council workshop at which responses to the preliminary document were assessed, presentations by UNOLS operating institutions were heard and considered, and a draft final report was written;
5. Distribution of the draft final report with a solicitation for responses from the UNOLS memberships;
6. At the October 14, 1982 scheduled Advisory Council Meeting, responses to the final draft were considered, the draft was modified and refined to produce the final report and the final report was transmitted to the Oceanographic Facilities and Support Section, National Science Foundation and the Office of Naval Research.

The Advisory Council intends that the UNOLS fleet study process continue into 1983 with assessment of 1983 UNOLS ship schedules, of projected ship use, and of the prospects for new or augmented sources of UNOLS ship funding. Advisory Council recommendations concerning individual ships and overall fleet composition will be re-evaluated prior to the UNOLS Semiannual Meeting, Spring, 1983.

In their report, the Advisory Council recognized that the fundamental problem facing U.S. oceanographic science is that there is insufficient funding for oceanographic research. Problems with ships and other major facilities are only symptomatic of the erosion that has occurred in the public financial base for oceanographic research; an erosion that leaves many highly rated proposals for marine science projects unfunded and a fleet operating level inadequate to support all of the excellent ocean science being proposed. Nevertheless, to meet its goal and fill its charge, the Council made specific recommendations that would alter the UNOLS Fleet by:

- reducing by one the number of ships in the combined Classes A and B;
- reducing by two the number of ships in Class C and transferring one of the remaining ships;
- combining existing marine operations into a single UNOLS operation in and for the Western Gulf of Mexico;
- placing all Class E and F ships in a group to be funded on a project-by-project basis and establishing a pool to, in part, fund these project operations.

In addition, the Advisory Council made recommendations on management of the UNOLS Fleet:

- establishing a National Expeditionary Planning Process (NEPP) with responsibilities for long lead time planning for the use of vessels, augmenting the existing East-West regional scheduling process;
- encouraging the use of the least expensive scientifically and logistically appropriate ship by requiring that funds for needed shiptime be explicitly stated in NSF proposals;
- encouraging increased cost-efficiency of ship operations throughout the fleet by establishing consistency and uniformity among institutions in their methods of detailing costs and expenditures, seeking explanations for apparent differences in the costs for similar ships, promoting the full exchange of institution's ship support proposals and expanding the exchange of information on ship costs; and
- encouraging earlier projections of scientific project funding to facilitate efficient ships operating schedules.

The Chairman then opened the meeting to a discussion of the report. In the wide-ranging discussion that followed Member and Associate Member delegates' comments were focused on three main themes:

- the validity of Advisory Council recommendations relating to individual elements in the fleet;
- the propriety and credibility of the study process; and
- fleet funding and management alternatives to present practices.



Individual recommendations: Delegates expressed concern over the relatively large reduction in large (Class A and B) ships that has occurred and would occur if Council recommendations were adopted. The essential need of the National Ocean Research Program for large ships was noted; some critical oceanography can only be accomplished with and from large ships. *Specific objections were lodged against the tentative recommendations to lay up the MELVILLE and to consider laying up the THOMPSON.*

Delegates objected to the reduction and redistribution of Class C ships in the Council's recommendations. They noted that ships in this class have been fully funded and fully employed. They questioned whether the Council had considered individual differences and capabilities of ships in this class and whether an individual ship in this class could meet the needs of new clientele and modes of operation if moved from one institution to another. *Objections were lodged against the recommendation to lay up the MOANA WAVE and to relocate the ISELIN.*

Delegates questioned the rationale supporting recommendations to reclassify the CAPE HENLOPEN and WARFIELD into Class E.

The recommendation to include the cost of ship time in all NSF proposals was endorsed, (note that although it was asserted that NSF Form 831 already includes the appropriate information, it does not include the cost of shiptime.)

Study process and procedure: Delegates suggested that the role of the Advisory Council should be to advise UNOLS and the assembled membership, rather than directly advising the sponsoring agencies. In terms of the fleet study, the report should have been to UNOLS, not to the funding agencies. They asserted that the study process was based on soft data and that, in formulating decisions affecting individual elements of the fleet, insufficient information was solicited from those institutions that might be impacted. Delegates protested the last-minute modifications to the report that allowed no opportunity for response from institutions that might be affected. Other delegates, however, endorsed the study process, stating that the Advisory Council is the appropriate body to address issues critical to the entire UNOLS community. They noted that the report, for the first time, reached definitive recommendations, and that it is important that UNOLS should make such recommendations. It was noted that recommendations on the entire fleet are in the spirit of UNOLS.

Delegates argued that the Advisory Council established a premise for the report that all operating institutions should be maintained and that this premise is invalid. Other delegates endorsed the concept of attempting to maintain the status of existing operating institutions.

G. Shor, designated representative from Scripps Institution of Oceanography, read into the minutes a letter asserting that the Advisory Council's recommendations were not consistent with the ship-use statistics and projections in the report and that the effort to maintain existing operating institutions was inappropriate and biased the recommendations. (Dr. Shor's letter is Appendix VIII.)

Additional questions were raised concerning the validity of the ship-use statistics, projections and interpretations as well as concerning the accuracy of other information in the report. Delegates asserted that Class C ships have always been fully funded and that ship-use projections are biased against Class C and smaller ships since they do not adequately project funding developed from sources other than the National Science Foundation's Oceanographic Facilities Support Section and the Office of Naval Research.

Delegates suggested that the Advisory Council erred by limiting their recommendations to changes in the fleet composition and distribution without, at the same time questioning program projections. Further, delegates asked if the ships recommended in the 1984 fleet (i.e., the UNOLS Minimum Fleet) would be adequate to fulfill funded program requirements.

Delegates from the institutions involved strongly endorsed the report's recommended changes in marine and ship operations for Western Gulf of Mexico Institutions.

Fleet funding and management alternatives: Delegates suggested a need for alternative funding policies and mechanisms that would reward efficiency in ship operations and, thereby, eventually eliminate inefficient operators. A suggested policy was for a free market mode of ship funding that would encourage the marketing of ship time and generate additional ship funding support. Operators urged that a system be adopted that would allow increased institutional discretion in ship management.

The discussion above on the Fleet Management Report was interrupted to hear UNOLS featured speaker, Rear Admiral Leland S. Kollmorgen, Chief of Naval Research, talk on *National Oceanographic Fleet Capabilities*.

Admiral Kollmorgen assessed the health of the oceanographic fleet from his Navy perspective: although he expressed concern about the fleet, there are some positive signs. He noted that the Office of Naval Research controls the Navy's oceanographic research vessels, including ALVIN which is operated by a UNOLS institution under an interagency agreement. He cited the Navy Oceanographic Office's publication of a coordinated schedule for research vessels, including UNOLS'. The Navy is funding 20-30% of basic research in the United States, and funding for oceanographic research is stable at about 1% growth rate. The desire, however, is for real growth in both basic research (6.1) and exploratory development (6.2) funds. ONR is providing \$15 million to support the upgrade of seven research vessels. ONR will continue to address its oversight responsibilities concerning research vessels.

Negative factors relate to the inability to achieve a satisfactory stable survey ship funding posture. The future of the Navy's HAYES is in question, because of too few customers and no suitable funding mechanism. The National Oceanic and Atmospheric Administration has already been forced to lay up one large ship.

The Office of Naval Research has introduced to the Federal Oceanographic Fleet Coordinating Council (FOFCC) a suggestion to project a *National Ocean Fleet Requirement*. This project, to be completed early next year, will on an interagency basis, audit existing fleet resources, establish use rates and project fleet ages, capabilities, etc., to establish National capabilities-

and facilities- requirements for the oceanographic fleet. Hopefully, such a study will result in a projection for growth in the fleet.

In addition to the Navy's consistent desire for and support of a strong oceanographic research program, national security considerations require that we examine our posture relative to other nations. At a time when large ships in the U.S. research fleet are in jeopardy and 55% of the fleet approaches 25 years of age, Russia has a fleet of 270 ships and has just added four new deep ocean vessels. We need to examine our response and provide facilities for an equally strong program. The FOFCC report may help provide the means to design and support a building program.

Because of the status of Law of the Sea and related sovereignty questions the National fleet may need more Navy ships than civil ones, since it may become difficult for civil ships to enter and operate in some waters.

In the discussion following Admiral Kollmorgan's remarks, concern was raised that the lack of reasonable lead time on funding decisions constrains the ability to provide rational management for seagoing operations. In response Admiral Kollmorgan and Mr. Robert Winokur recognized the need for timely funding decisions to support advanced operational planning and noted that ONR is developing a posture to provide better funding projections and longer (up to 5 years) program commitments. These program projections would include both core programs and special programs (i.e., bioluminescence, marginal ice zone, southern oceans and air-sea interaction).

Following Admiral Kollmorgan's presentation, the Chairman called on Mr. Eugene B. Veek, Chairman, Research Vessel Operator's Council (RVOC) to report on the RVOC Meeting of September 27, 28, 1982. Mr. Veek reported a successful meeting and called to UNOLS attention:

RVOC establish a Committee on Safety Standards to review and revise UNOLS Research Vessel Safety Standards.

RVOC discussed national and state permit requirements for oceanographic research, especially as characterized by California's recently established requirements. The Council submits the following position statement to UNOLS: *The RVOC senses that the recent regulations imposed by the California State Lands Commissions concerning Geological and Geophysical research may seriously impede scientific research along the coast. We recommend that UNOLS follow developments and take action as appropriate.*

New RVOC officers were elected, Ms. Dolly Dieter (University of Alaska), Chairman, and Mr. John Bash (University of Rhode Island), Vice-Chairman.

Reports from Federal Funding agencies were made by Ronald R. La Count, National Science Foundation, Keith Kaulum, Office of Naval Research and Captain Richard Alderman, National Oceanic and Atmospheric Administration.

R. La Count noted that the FY-1983 appropriation for NSF had just been passed and signed. Although the appropriation total \$1.092 billion is favorable to NSF, some budget details have not yet been settled, and until they are, NSF will operate at a 75%-of-current level. The Director, NSF



believes that the agency is receiving fair treatment and has good interaction with the Office of Management and Budget and with the Office of Science and Technology Policy.

Indications for FY-1984 are for continuing budget strictures, with growth in the range 3-5%.

The budget cycle for FY-1985 begins in the last week in October.

K. Kaulum noted that ONR is still operating on a Continuing Resolution for FY-1983. The budget information reported at the May, 1982 UNOLS meeting still holds. There will be at least three special focus programs in 1984: Southern Ocean, Upper Ocean Variability and Bioluminescence. UNOLS is cautioned that funding associated with these special programs comes in part from core programs and cannot all be considered as additional funding.

The ONR will be the decision agency within the Navy for the research equipment proposals recently solicited by the Department of Defense. The ONR encourages and expects a large response from the oceanographic community.

Captain R. Alderman reported that NOAA is operating under a Continuing Resolution at least until December 15. The FY-1983 budget includes reductions that would take out of service the SURVEYOR and FERREL, eliminate the Miami shipbase and limit ship operations generally to 180 days/ship. None of these decisions are final.

The Advisory Council resolution *On the Orderly Replacement of the Academic Research Fleet* was re-addressed. George Shor, Scripps representative, introduced this amended resolution:

*We have engaged through the summer in preparation of detailed recommendations for reduction and reordering of the UNOLS fleet. The study brought to our acute attention the importance of orderly replacement of the UNOLS fleet, whatever the availability of funds for science. This requirement must be met in order that marine science continue to progress in the 1990's and after 2000. A replacement schedule must be developed in detail now, and preparation of plans for specific replacements should begin in 1983.*

*The Executive Committee shall establish a Committee of three or more people from among UNOLS Member institutions. These persons shall be experienced in ship operations and scientific needs to study replacement needs and report their recommendations for replacement in the 1990's to the UNOLS membership.*

*Our recommendations anticipate the following needs will be addressed by the Committee:*

- 1) An immediate start on planning for replacement of Class A and Class B ships (large, long-range vessels, some of them with special purposes). We must retire some of these by the 1990's. Such ships are essential to our capability for modern oceanography. Planning for replacement must begin now. The committee will prepare and propose mechanisms for drawing specific plans for new platforms.*



- 2) *A full schedule for replacement of intermediate (C and D) vessels must be prepared. Planning for at least one replacement in the late 1980's must begin now.*
- 3) *Detailed consideration is required of new means to promote greater cost efficiency, particularly fuel efficiency. We also need specific anticipation to meet the needs of oceanography in the 1990's.*

*UNOLS should direct its executive secretary to prepare, under guidance from the study committee, a proposal to NSF/ONR to support the work of the committee. UNOLS should direct the proposed committee to report by the Spring, 1983 meeting of UNOLS on 1) replacement schedule, 2) design directions, and 3) anticipated future scientific needs.*

*By this recommendation the Advisory Council and UNOLS assures the NSF and ONR that UNOLS is determined to proceed with orderly replacement of the UNOLS fleet. We will ardently pursue a strong operating fleet into the indefinite future.*

The resolution was seconded and passed by the UNOLS assembled membership.

W. Barbee, Executive Secretary, UNOLS reported on matters of interest to the UNOLS membership:

UNOLS has been asked to participate as observers to the Federal Oceanographic Fleet Coordinating Council (FOFCC). The UNOLS Chairman, D. Spencer is observer to the FOFCC and the Executive Secretary is observer to the Coordination Board, FOFCC. Through the FOFCC, UNOLS is providing information on ship schedules for the Naval Oceanographic Office's annual publication of *Oceanographic Ships Operating Schedules*. (Note that since these schedules are published soon after UNOLS schedules are relatively firm, the UNOLS Office will no longer publish a summary of schedules for the UNOLS fleet.) Information is also being solicited from UNOLS as part of the FOFCC projection on National Ocean Fleet Requirements, the study described earlier by Admiral Kollmorgen.

Permit requirements by both states and the federal government, especially for geological and geophysical investigations, may become a critical issue. Note the RVOC position recommendation cited earlier.

Several UNOLS institutions have had recent problems with export licenses for technologically sensitive equipment. This issue is the subject of a memorandum from C. Miller (Appendix IX).

Captain Robertson Dinsmore reported on the joint meeting of the Eastern and Western Regional Ship Scheduling Groups held October 14, 1982. He noted that although 1983 schedules were developed based on the information available, fifteen to twenty percent of the projects included remain tentative pending decisions on funding. Funding decisions have not been made in some instances because proposals have not yet been submitted and in other instances because the proposals have not yet been acted upon. ONR has deferred some funding decisions and from NSF, decisions have yet to be made concerning Division of Polar Programs projects and ocean drilling work through Joint Oceanographic Institutions, Inc.

The schedules developed accommodate all funded or likely projects, leaving no one on the dock. The schedules include approximately 120 ship-days for polar programs. Three large ships will be available for only part of 1983. The THOMAS G. THOMPSON and the THOMAS WASHINGTON have scheduled midlife refits and the ATLANTIS II will be modified to support ALVIN.

Captain Dinsmore noted that ship requirements for many large programs (e.g., East Pacific Rise, OPUS, MANOP, VERTEX) remain tentative, and that large expeditions requiring extensive ship time are not developing as rapidly as had been anticipated.

Scheduling for 1983 was summarized with the aid of three visuals (Appendix X):

1. A September 1, 1982 summary of ship operations funding requests (June 1982 proposals) totalled nearly \$36 million, and implied a shortfall of \$6,645,000. This shortfall was a significant increase over the approximately \$4 million shortage projected at the May, 1982 UNOLS meeting.
2. Results of current scheduling reduce the total of proposals to \$34.3 million.
3. The summary of proposed ship costs and anticipated fundings implies a remaining shortfall of \$1.7 million.

A short general discussion was held concerning the need for consistent accounting and reporting procedures for ship costs. The membership directed that the UNOLS Office aid in the exchange of ship cost information among institutions to help develop standard accounting procedures.

The meeting was adjourned at 1545.

William D. Barbee  
Executive Secretary, UNOLS

UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

SEMI-ANNUAL MEETING

AGENDA

0830 FRIDAY, OCTOBER 15, 1982, COSMOS CLUB AUDITORIUM

2121 MASSACHUSETTS AVENUE N.W., WASHINGTON, D.C.

INTRODUCTION AND WELCOME - Dr. Derek Spencer, Chairman UNOLS

UNOLS ADVISORY COUNCIL - A Report on Council Activities and the Council Report on UNOLS Fleet Management - Dr. Bruce H. Robison, Chairman

REMARKS FROM FEDERAL FUNDING AGENCIES - Acknowledgement of receipt of the Advisory Council Report and updated forecasts of FY 83/84 ship support -- NSF, ONR and Others

NATIONAL OCEANOGRAPHIC FLEET CAPABILITIES - Rear Admiral Leland S. Kollmorgen, Chief of Naval Research

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1200-1400

LUNCH BREAK

OPEN

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UNOLS OFFICE ACTIVITIES - A report to the Membership on communications within UNOLS, and interaction with the Federal Oceanographic Fleet Coordinating Council (FOFCC) - William D. Barbee

REPORT OF REGIONAL SCHEDULING GROUPS' JOINT MEETING - Dr. George C. Anderson and Captain Robertson P. Dinsmore, Chairmen

## List of Registered Attendees

October 15, 1982

Alderman, Capt. R.E., NOAA	Lewis, Dr. B.T.R., UW*
Aldrich, Dr. T.C., USGS	Martin, Dr. J.H., MLML
Anderson, Dr. G.C., UW	McMillan, Mr. J.G., NSF
Barbee, Mr. W.D., UNOLS	Menzel, Dr. D.W., UGA, Skidaway*
Bash, Mr. J.F., URI	Miller, Dr. C.B., OSU*
Behrens, Jr., Dr. W.W., FIO*	Mitchell, Mr. D.R., NSF
Berman, Dr. A., U Miami	Mitchell, Ms. J.R., NSF
Campbell, Mr. J.F., UH	Munson, Adm. R.C., NOAA
Cecil, Ms. E.A., NSF	Owen, Mr. W., UD
Clark, Mr. L., NSF	Robison, Dr. B.H., UCSB
Corell, Dr. R.W., UNH*	Royer, Dr. T.C., UAK*
Curray, Dr. J.R., Scripps	Sackett, Dr. W.M., FIO
Davies, Dr. T.A., UT*	Schneider, Mr. R.W., UD*
Dieter, Ms. E.R., UAK	Shor, Jr., Dr. G.G., Scripps*
Dinsmore, Capt. R.P., WHOI	Spencer, Dr. D., WHOI*
Donnelly, Mr. J.D., WHOI	Stevens, Dr. L.R., DOS
Frankenberg, Dr. D., Duke-UNC*	Tollerton, Ms. K., NASULGC
Gibbons, Mr. J., U Miami*	Treadwell, Capt. T.K., TAMU*
Gorsline, Dr. D.S., USC	Tulou, Mr. C.A.G., HMMFC, U.S. Congress
Griffin, Dr. J.J., URI*	Ustach, Dr. J., Duke-UNC
Harding, Dr. L.W., JHU*	Van Leer, Dr. J.C., U Miami
Helsley, Dr. C.E., UH*	Veek, Mr. E.B., USC
Kaulum, Mr. K., ONR	Wall, Dr. R.E., NSF
Keach, Mr. D. USC*	Watkins, Jr., Capt. J.B., UW
Kennedy, Mr. H.V., LDGO	West, Dr. R.W., NSF
Kollmorgen, Adm. L.S., Chief, Naval Research	Williams, Capt. J.G., Scripps
La Count, Mr. R.R., NSF	Wilson, Mr. R.C., Scripps
Lanseth, Dr. M.G., LDGO	Winokur, Mr. R., ONR

\* Representative of UNOLS Member Institution



UNOLS DIRECTORY  
(with designated representatives)

## MEMBERS

UNIVERSITY OF ALASKA  
*Dr. Thomas C. Royer*

UNIVERSITY OF DELAWARE  
*Dr. William S. Gaither*

DUKE/UNIVERSITY OF NORTH CAROLINA  
*Dr. Dirk Frankenberg*

UNIVERSITY OF HAWAII  
*Dr. Charles E. Helsley*

THE JOHNS HOPKINS UNIVERSITY  
*Dr. Lawrence Harding*

COLUMBIA UNIVERSITY, LAMONT-DOHERTY  
GEOLOGICAL OBSERVATORY  
*Dr. Mark Langseth*

UNIVERSITY OF MIAMI, ROSENSTIEL SCHOOL  
OF MARINE AND ATMOSPHERIC SCIENCE  
*Mr. James Gibbons*

UNIVERSITY OF MICHIGAN, GREAT LAKES  
AND MARINE WATERS CENTER  
*Dr. Alfred M. Beeton*

OREGON STATE UNIVERSITY  
*Dr. George H. Keller*

UNIVERSITY OF RHODE ISLAND  
*Dr. James J. Griffin*

UNIVERSITY OF CALIFORNIA, SAN DIEGO  
SCRIPPS INSTITUTION OF OCEANOGRAPHY  
*Dr. George G. Shor, Jr.*

UNIVERSITY SYSTEM OF GEORGIA  
SKIDAWAY INSTITUTE OF OCEANOGRAPHY  
*Dr. David W. Menzel*

UNIVERSITY OF SOUTHERN CALIFORNIA  
*Dr. Don Walsh*

UNIVERSITY OF TEXAS  
*Professor J. Robert Moore*

TEXAS A & M UNIVERSITY  
*Captain T. K. Treadwell*

UNIVERSITY OF WASHINGTON  
*Dr. Brian Lewis*

WOODS HOLE OCEANOGRAPHIC INSTITUTION  
*Dr. Derek W. Spencer*

## ASSOCIATE MEMBERS

UNIVERSITY OF ALABAMA  
*Dr. George F. Crozier*

BERMUDA BIOLOGICAL STATION  
*Dr. Wolfgang E. Sterrer*

BIGELOW LABORATORY FOR OCEAN SCIENCES  
*Dr. Charles S. Yentsch*

BROOKHAVEN NATIONAL LABORATORY  
*Dr. Terry E. Whitledge*

UNIVERSITY OF CALIFORNIA, SANTA  
BARBARA  
*Dr. Bruce H. Robison*

CAPE FEAR TECHNICAL INSTITUTE  
*Mr. Edward Foss*

## ASSOCIATE MEMBERS (CONT'D)

UNIVERSITY OF CONNECTICUT  
*Professor Sung Feng*

FLORIDA INSTITUTE FOR OCEANOGRAPHY  
*Dr. William W. Behrens*

FLORIDA INSTITUTE OF TECHNOLOGY  
*Mr. Jack Morton*

FLORIDA STATE UNIVERSITY  
*Dr. George W. Flagler*

HARBOR BRANCH FOUNDATION  
*Dr. Robert S. Jones*

HOBART & WILLIAM SMITH COLLEGES  
*Mr. F. Richard Wilkins*

LEHIGH UNIVERSITY  
*Dr. Adrian F. Richards*

UNIVERSITY OF MAINE  
*Dr. Bernard J. McAlice*

MARINE SCIENCE CONSORTIUM  
*Dr. Robert W. Hinds*

UNIVERSITY OF MARYLAND  
*Dr. Ian Morris*

MASSACHUSETTS INSTITUTE OF TECHNOLOGY  
*Dr. John M. Edmond*

MOSS LANDING MARINE LABORATORIES  
*Dr. John H. Martin*

UNIVERSITY OF NEW HAMPSHIRE  
*Professor E. Eugene Allmendinger*

NEW YORK STATE UNIVERSITY COLLEGE AT  
BUFFALO  
*Dr. Robert A. Sweeney*

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*

NOVA UNIVERSITY  
*Dr. George E. Lawniczak*

OCCIDENTAL COLLEGE  
*Dr. John S. Stephens, Jr.*

UNIVERSITY OF PUERTO RICO  
*Dr. Thomas Tosteson*

SAN DIEGO STATE UNIVERSITY  
*Dr. Richard F. Ford*

VIRGINIA INSTITUTE OF MARINE SCIENCE  
*Dr. John M. Zeigler*

WALLA WALLA COLLEGE  
*Dr. Lawrence McCloskey*

UNIVERSITY OF WISCONSIN AT MADISON  
*Dr. Robert A. Ragotzkie*

UNIVERSITY OF WISCONSIN AT MILWAUKEE  
*Dr. David N. Edgington*

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

8/82

OPERATOR	NAME	LOA (FT/M)	BUILT CONVERTED	NO. SCIENTISTS	OWNER	SHIP SCHEDULING CONTACT
University of Hawaii Hawaii Institute of Geophysics 2525 Correa Road Honolulu, Hawaii 96822	KANA KEOKI MOANA WAVE	156/48 174/53	1967 1973	16 13	U.H. NAVY	Mr. J. Frisbee Campbell Scientific Coordinator for Marine Operations (808) 948-7654
University of Alaska Institute of Marine Science Fairbanks, Alaska 99701	ALPHA HELIX	133/41	1966	15	NSF	Professor Thomas C. Royer Associate Professor (907) 474-7835
University of Washington School of Oceanography, WB-10 Seattle, Washington 98195	T.G. THOMPSON HOH ONAR	209/64 65/20 65/20	1965 1943/1962 1954/1963	19 6 6	NAVY NAVY NAVY	Dr. George C. Anderson Director (206) 543-6487
Oregon State University School of Oceanography Corvallis, Oregon 97331	WECOMA	177/54	1975	16	NSF	Ms. Mary Jo Gutierrez Ship Scheduling Officer (503) 754-4447
Moss Landing Marine Laboratories P.O. Box 223 Moss Landing, California 95039	CAYUSE	80/24	1968	8	NSF	Miss Gail Liragis Ship Scheduler (408) 633-3304
University of Southern California Inst. for Marine & Coastal Studies Los Angeles, California 90007	VELERO IV	110/34	1948	12	USC	Mr. Eugene B. Veek Assoc. Dir. for Facilities (213) 743-7735
University of California, San Diego Scripps Institution of Oceanography La Jolla, California 92093	MELVILLE T. WASHINGTON NEW HORIZON E.B. SCRIPPS	245/75 209/64 170/52 95/29	1970 1965 1978 1965	31 23 13 8	NAVY NAVY U.C. U.C.	Dr. George Shor, Jr. Ship Scheduler Code A-010 (714) 452-2840
University of Michigan Great Lakes & Marine Waters Center Ann Arbor, Michigan 48109	LAURENTIAN	80/24	1974	10	U.M.	Mr. Clifford Tetzloff Marine Superintendent (313) 763-3183
Texas A & M University Department of Oceanography College Station, Texas 77843	GYRE	174/53	1973	19	NAVY	Capt. T.K. Treadwell Marine Operations Officer (713) 845-7211
The University of Texas Port Aransas Marine Laboratory Port Aransas, Texas 78373	LONGHORN	80/24	1971	10	U.T.	Mr. John H. Thompson Assoc. Director-Admin. (512) 749-6760
University of Miami, R.S.M.A.S. 4600 Rickenbacker Causeway Miami, Florida 33149	ISELIN CAPE FLORIDA CALANUS	170/52 135/41 64/20	1972 1981 1971	13 12 6	U.M. NSF U.M.	Mr. James Gibbons Operations Manager (305) 350-7223
University System of Georgia Skidaway Institute of Oceanography P.O. Box 13687 Savannah, Georgia 31406	BLUE FIN	72/22	1972/1975	8	U.G.	Dr. David W. Menzel Director (912) 356-2480
Duke / UNC Oceanographic Consortium Duke University Marine Lab. Beaufort, North Carolina 28516	CAPE HATTERAS	135/41	1981	12	NSF	Capt. 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 Lewes, Delaware 19958	CAPE HENLOPEN	120/37	1975	12	U.D.	Mr. Wadsworth Owen Dir. of Marine Operations (302) 645-4320
Columbia University Lamont-Doherty Geological Observatory Palisades, New York 10964	CONRAD	209/64	1962	16	NAVY	Dr. Jeffrey Weissel Ship Scheduler (914) 359-2900 Ext. 533
University of Rhode Island Graduate School of Oceanography Narragansett, Rhode Island 02881	ENDEAVOR	177/54	1976	16	NSF	Mr. John F. Bash Ship Scheduler, Asst. Mar. Supt (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	1969 1963 1975 1964	23 25 12 2	NAVY WHOI NSF NAVY	Mr. John D. Donnelly Manager of Marine Operations (617) 548-1400 Ext. 2510

## UNOLS RESEARCH VESSELS FLEET OPERATION - 1981 -

UNOLS OFFICE

## CRUISE DAYS PROFILES

AUGUST 1982

AGENCY	PHYS OCEAN	ACCOU STICS	CHEM OCEAN	BIOL OCEAN	ENVIR ECOL	FISH INVST	CLIM METEO	GEOLE GEOPH	MAP CHRTG	OCEAN ENGRG	TRAIN ING	TRANS NONSCI	TOTAL -----
NAT'L SCIENCE FNDTN	560	65	495	923	179	40	5	642	0	63	8	26	3006
OFF. NAVAL RESEARCH	193	103	12	18	1	0	0	151	0	27	0	0	510
US GEOL. SURVEY	8	2	0	0	0	0	0	178	0	0	0	0	188
RUR. LAND MNGMT.	50	0	0	0	21	0	0	31	0	0	3	0	105
NAT'L OCEAN/ATMOSPH	11	0	24	0	0	0	1	6	6	0	0	0	48
DEPT OF ENERGY	19	0	128	70	20	0	0	73	0	7	0	0	317
OTHER FEDERAL	0	0	0	11	0	0	0	1	0	6	0	0	18
STATE/MUNICIPAL	0	3	11	27	24	84	1	19	0	0	53	0	222
OTHER / PRIVATE	2	13	11	0	0	0	0	56	0	0	0	0	87
*****													
TOTALS	843	191	681	1049	245	124	7	1157	6	103	64	26	4501
PERCENT	18.9	4.2	15.1	23.3	5.4	2.8	.2	25.7	.1	2.3	1.4	.6	

## UNOLS RESEARCH VESSELS FLEET OPERATION - 1981 -

UNOLS OFFICE

## CRUISE DAYS PROFILES

AUGUST 1982

INSTITUTION	PHYS OCEAN	ACCOU STICS	CHEM OCEAN	BIOL OCEAN	ENVIR ECOL	FISH INVT	CLIM METEO	GEOLE GEOPH	MAP CHRTG	OCEAN ENGRG	TRAIN ING	TRANS NONSCI	TOTAL -----
UNIV. HAWAII	65	3	33	30	0	0	0	131	0	0	0	0	262
UNIV. ALASKA	30	0	32	20	53	0	0	6	0	0	1	0	142
UNIV. WASHINGTON	82	1	62	199	41	0	1	49	0	1	16	0	502
OREGON STATE UNIV.	98	0	50	2	0	0	0	52	0	34	0	0	236
SCRIPPS INST. OCEAN	74	84	48	229	32	84	6	260	0	0	5	0	822
UNIV. SO. CALIF.	0	37	0	18	43	0	0	56	0	10	0	0	164
TEXAS A&M UNIV.	33	49	0	51	0	0	0	139	0	0	10	0	287
UNIV. TEXAS	7	0	9	10	1	0	0	68	0	0	6	0	101
UNIV. MIAMI, RSMAS	59	2	74	163	0	19	0	132	0	4	7	13	473
UNIV GA., SKIDAWAY	4	0	18	87	0	0	0	3	6	7	1	0	126
DUKE UNIV.	0	0	0	2	0	0	0	0	0	0	0	0	2
JOHNS HOPKINS UNIV.	1	0	0	71	0	12	0	0	0	0	0	0	84
UNIVERSITY DELAWARE	43	0	25	7	21	0	0	55	0	0	3	0	154
LAMONT-DOHERTY GEOL	0	0	0	0	0	0	0	21	0	0	0	0	21
UNIV. RHODE ISLAND	102	0	47	7	0	0	0	103	0	0	0	13	272
WOODS HOLE OCEAN. I	168	15	278	99	0	9	0	79	0	47	0	0	695
LANDING MAP LAB	77	0	5	54	4	0	0	3	0	0	15	0	158
*****													
TOTALS	848	191	681	1049	245	124	7	1157	6	103	64	26	4501
PERCENT	18.8	4.2	15.1	23.3	5.4	2.8	.2	25.7	.1	2.3	1.4	.6	



## UNOLS RESFARCH VESSELS FLEET OPERATION - 1981 -

UNOLS OFFICE

## CRUISE DAYS PROFILES

AUGUST 1982

VESSEL	PHYS OCEAN	ACCOU STICS	CHEM OCEAN	BIOLOGICAL OCEAN	ENVIR ECOL	FISH INVEST	CLIM METEO	GEOLOGICAL GEOPH	MAP CHRTG	OCEAN ENGRG	TRAIN ING	TRANS NONSCI	TOTAL -----
MELVILLE	0	0	31	78	10	0	6	122	0	0	0	0	247
KNORR	18	0	202	15	0	0	0	0	0	0	0	0	235
ATLANTIS II	92	0	76	21	0	0	0	32	0	0	0	0	221
T.G. THOMPSON	45	0	38	83	24	0	0	14	0	0	0	0	264
T. WASHINGTON	42	34	13	0	0	0	0	124	0	0	0	0	213
VEVA	0	0	0	0	0	0	0	21	0	0	0	0	21
ENDEAVOR	102	0	47	7	0	0	0	103	0	0	0	0	272
OCEANUS	58	15	0	63	0	9	0	47	0	47	0	0	239
WFCOMA	98	0	50	2	0	0	0	52	0	34	0	0	236
GYRE	38	49	0	51	0	0	0	139	0	0	10	0	287
C. ISELIN	54	0	32	58	0	19	0	63	0	0	0	0	226
NEW HORIZON	10	31	4	66	19	84	0	0	0	0	2	0	216
KANA KEOKI	65	3	33	30	0	0	0	131	0	0	0	0	262
CAPE FLORIDA	5	2	26	49	0	0	0	0	0	0	6	13	101
ALPHA HELIX	30	0	32	20	53	0	0	6	0	0	1	0	142
CAPE HENLOPEN	43	0	25	7	21	0	0	55	0	0	3	0	154
FASTWARD	0	0	0	2	0	0	0	0	0	0	0	0	2
VELERO IV	0	37	0	18	43	0	0	56	0	10	0	0	164
R. WARFIELD	1	0	0	71	0	12	0	0	0	0	0	0	84
F.B. SCRIPPS	22	19	0	85	3	0	0	14	0	0	3	0	146
CAYUSE	77	0	5	54	4	0	0	3	0	0	15	0	158
LONGHORN	7	0	9	10	1	0	0	68	0	0	6	0	101
BLUEFIN	4	0	18	87	0	0	0	3	6	7	1	0	126
HOM	17	1	8	60	1	0	0	0	0	1	9	0	97
ONAR	20	0	16	56	6	0	1	35	0	0	7	0	141
CALANUS	0	0	16	56	0	0	0	69	0	4	1	0	146
*****													
TOTALS	848	191	681	1049	245	124	7	1157	6	103	64	26	4501
PERCENT	18.9	4.2	15.1	23.3	5.4	2.8	.2	25.7	.1	2.3	1.4	.6	

## UNOLS RESEARCH VESSEL FLEET OPERATIONS - 1981 -

UNOLS OFFICE

## OPERATIONAL DAYS CHARGED BY SPONSOR

AUGUST 1982

INSTITUTION	NATL SCI. FNDTN	OFF. NAVAL RES.	U.S. GFOL SURV.	BUR. LAND MNGMT	NATL OCEAN ATMOS	DEPT OF ENRGY	OTHER FEDER FUNDS	STATE OR MUNIC	PRIV/ FORGN FUNDS	TOTALS -----
UNIV. HAWAII	106	143	10	0	0	0	0	3	0	262
UNIV. ALASKA	142	0	0	0	0	0	0	0	0	142
UNIV. WASHINGTON	406	15	9	0	26	25	0	21	0	502
OREGON STATE UNIV.	209	0	0	0	0	2	0	0	25	236
SCRIPPS INST. OCEAN	513	184	0	0	0	8	0	117	0	822
UNIV. SO. CALIF.	132	25	6	0	0	0	0	1	0	164
TEXAS A&M UNIV.	99	32	116	0	0	0	1	19	20	287
UNIV. TEXAS	56	0	18	0	0	6	0	21	0	101
UNIV. MIAMI. RSMAS	372	36	0	13	0	21	0	1	30	473
UNIV GA.. SKIDAWAY	38	0	0	0	6	59	11	12	0	126
DUKE UNIV.	2	0	0	0	0	0	0	0	0	2
JOHNS HOPKINS UNIV.	84	0	0	0	0	0	0	0	0	84
UNIVERSITY DELAWARE	7	0	0	67	16	52	0	0	12	154
LAMONT-DOHERTY GEOL	21	0	0	0	0	0	0	0	0	21
UNIV. RHODE ISLAND	209	22	0	13	0	28	0	0	0	272
WOODS HOLE OCEAN. I LANDING MAR LAB	479	53	29	12	0	116	6	0	0	695
	131	0	0	0	0	0	0	27	0	158
TOTALS	3006	510	188	105	48	317	18	222	87	4501
PERCENT	66.8	11.3	4.2	2.3	1.1	7.0	.4	4.9	1.9	

UNOLS RESEARCH VESSEL FLEET OPERATIONS - 1991 -

UNOLS OFFICE

OPERATIONAL DAYS CHARGED BY SPONSOR

AUGUST 1982

VESSEL	LOA	NATI SCI. FNDTN	OFF. NAVAL RES.	U.S. GFOL SURV.	BUR. LAND MNGMT	NATI OCEAN ATMOS	DEPT OF ENRGY	OTHER FEDER FUNDS	STATE OR MUNIC	PRIV/ FORGN FUNDS	TOTALS -----
MELVILLE	245FT	246	0	0	0	0	0	0	1	0	247
KNORR	245FT	111	8	0	0	0	116	0	0	0	235
ATLANTIS II	210FT	221	0	0	0	0	0	0	0	0	221
T.G. THOMPSON	209FT	230	14	0	0	0	20	0	0	0	264
T. WASHINGTON	209FT	76	133	0	0	0	0	0	4	0	213
VEMA	197FT	21	0	0	0	0	0	0	0	0	21
ENDEAVOR	177FT	209	22	0	13	0	28	0	0	0	272
OCEANUS	177FT	147	45	29	12	0	0	6	0	0	239
NECOMA	177FT	209	0	0	0	0	2	0	0	25	236
GYRE	174FT	99	32	116	0	0	0	1	19	20	287
C. ISELIN	170FT	166	32	0	13	0	15	0	0	0	226
NEW HORIZON	170FT	61	41	0	0	0	8	0	106	0	216
KANA KEOKI	156FT	106	143	10	0	0	0	0	3	0	262
CAPE FLORIDA	135FT	95	0	0	0	0	6	0	0	0	101
ALPHA HELIX	133FT	142	0	0	0	0	0	0	0	0	142
CAPE HENLOPEN	120FT	7	0	0	67	16	52	0	0	12	154
EASTWARD	118FT	2	0	0	0	0	0	0	0	0	2
VELEPO IV	110FT	132	25	6	0	0	0	0	1	0	164
R. WARFIELD	106FT	84	0	0	0	0	0	0	0	0	84
E.R. SCRIPPS	95FT	130	10	0	0	0	0	0	6	0	146
CAYUSE	80FT	131	0	0	0	0	0	0	27	0	158
LONGHORN	80FT	56	0	18	0	0	6	0	21	0	101
BLUEFIN	72FT	38	0	0	0	6	59	11	12	0	126
HOB	65FT	78	1	0	0	9	0	0	9	0	97
ONAR	65FT	98	0	9	0	17	5	0	12	0	141
CALANUS	64FT	111	4	0	0	0	0	0	1	30	146
TOTALS		3005	510	188	105	48	317	18	222	87	4501
PERCENT		66.8	11.3	4.2	2.3	1.1	7.0	.4	4.9	1.9	

UNOLS OFFICE  
AUGUST 1982

UNOLS RESEARCH VESSELS FLEET OPERATIONS - 1981 -

PROJECT PERSON-DAYS AT SEA BY SPONSOR

VESSEL	LOA	TOTAL DAYS CHRGD	NATL SCI. FNDRN	OFF. NAVAL RES.	U.S. GEOL. SURV.	RUR. LAND MNGMT	NATL OCEAN ATMOS	DEPT. OF ENRGY	OTHER FEDER FUNDS	STATE OR MUNIC	PRIV/ FORGN FUNDS	TOTALS -----
MELVILLE	245	247	4842	0	0	0	242	0	0	6	0	5090
KNORR	245	235	8522	72	0	0	0	365	0	0	0	8959
ATLANTIS II	210	221	3711	0	0	0	0	0	42	0	10	3763
T.G. THOMPSON	209	264	3347	84	0	0	0	358	0	0	0	3789
T. WASHINGTON	209	213	878	1813	0	0	0	234	0	0	0	2925
VEMA	197	21	209	0	0	0	0	0	0	0	0	209
ENDEAVOR	177	272	2044	314	0	182	0	353	63	0	0	2956
OCEANUS	177	239	1969	550	348	144	0	0	22	0	14	3047
WECOMA	177	236	2219	0	0	0	0	182	34	0	425	2860
GYDE	174	287	516	1000	2820	5	0	0	0	185	408	5034
C. ISELIN	170	226	2057	320	0	164	32	144	0	0	0	2717
NEW HORIZON	170	216	636	366	0	0	0	534	50	958	0	2544
KANA KEOKI	156	262	1106	1295	80	0	0	0	1036	39	472	4028
CAPE FLORIDA	135	101	890	0	0	0	0	247	0	0	0	1137
ALPHA HELIX	133	142	1339	0	0	0	0	85	0	0	0	1424
CAPE MENLOPEN	120	154	63	0	0	523	234	534	0	0	120	1474
EASTWARD	118	2	0	0	0	18	0	0	0	0	0	18
VELERO IV	110	164	1813	152	66	0	42	0	0	8	0	2081
M. WARFIELD	106	84	434	0	0	0	0	0	0	0	0	434
E.R. SCOTTS	095	146	904	93	0	0	0	0	36	110	0	1143
CAYUSE	080	158	759	0	0	0	0	0	0	297	0	1056
LONGHORN	080	101	391	0	120	0	0	48	0	245	0	804
BLUEFIN	072	125	109	0	0	0	19	231	69	89	0	517
HOH	065	97	200	5	0	0	45	0	0	114	0	364
UNAR	065	141	426	0	35	0	117	19	0	113	0	710
CALANUS	064	146	653	12	0	0	0	0	0	23	180	868
TOTALS		4501	40137	6076	3469	1036	731	3334	1352	2187	1629	59951
PERCENT			66.9	10.1	5.8	1.7	1.2	5.6	2.3	3.6	2.7	



## UNOLS CRUISE PARTICIPANTS -1981

UNOLS OFFICE  
AUGUST 1982

SHIP	SCI	TECH	GRAD	UGRAD	ASSOC	NON	FED	FRGN	DAYS
KANA KEOKI	47	85	30	42	1	16	4	2	262
ALPHA FELIX	32	46	33	16	10	9	2	5	142
T.G. THOMPSON	41	99	8	44	51	7	6	3	264
HOH	60	95	47	94	0	0	22	0	97
ONAR	76	87	43	74	0	0	42	1	141
WECOMA	53	140	0	58	15	26	8	5	236
MELVILLE	55	90	20	28	4	12	5	21	247
NEW HORIZON	62	105	12	67	20	27	11	25	216
F.H. SCRIPPS	48	63	49	107	45	10	9	28	146
T. WASHINGTON	67	86	13	14	7	26	0	5	213
VELERO IV	80	78	9	14	23	52	14	1	164
GYRE	89	222	38	39	4	15	202	1	287
LONGHORN	43	73	6	180	5	132	15	0	101
C. ISELIN	57	83	33	18	34	19	2	4	226
CAPE FLORIDA	21	46	4	13	0	7	0	0	101
CALANUS	36	21	20	26	3	13	2	0	146
BLUEFIN	52	93	20	37	5	26	8	0	126
EASTWARD	1	8	0	0	0	0	0	0	2
P. WARFIELD	52	65	15	8	2	6	8	1	84
CAPE HENLOPEN	38	150	0	24	12	36	2	0	154
VEMA	4	7	0	0	0	0	0	3	21
ENDEAVOR	58	102	22	9	11	12	0	5	272
ATLANTIS II	49	62	33	13	18	23	0	10	221
KNORR	82	283	4	3	1	9	2	2	235
OCEANUS	143	141	10	6	8	17	46	6	239
CAYUSE	47	64	3	217	16	72	1	0	158
TOTALS	1393	2394	472	1151	295	572	411	128	4501

GRAND TOTAL PERSONNEL =6416.

PERCENT	20.4	35.1	6.9	16.9	4.3	8.4	6.0	1.9
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# UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

An association of Institutions  
for the coordination and support  
of university oceanographic facilities

UNOLS Office, WB-15  
School of Oceanography  
University of Washington  
Seattle, WA 98195

UNOLS

## APPLICATION FOR ASSOCIATE MEMBERSHIP

Pursuant to the UNOLS Charter the below named organization hereby submits application for associate membership in the University-National Oceanographic Laboratory System. In doing so the applicant understands and agrees to work for the objectives set forth in the UNOLS Charter.

Name of  
Institution: Old Dominion University

Name of person delegated to act as representative to UNOLS

Name: Dr. Harris B. Stewart, Jr.

Title: Director, Center for Marine Studies

Address: Old Dominion University, Norfolk, Virginia 23508

Telephone Number: (804) 440-3989

General Information on oceanographic, Sea Grant and other marine science programs:

No. Professional Personnel see note No. Graduate Students 109 (1982)

Approximate Annual Budget Approximately \$1.2 million including grants & contracts.

List of research vessels owned or operated:

<u>NAME</u>	<u>SIZE</u>
<u>R/V Linwood V. Holton</u>	<u>65-ft. T-boat</u>
<u> </u>	<u> </u>
<u> </u>	<u> </u>

NOTE: Please attach copies of brochures, bulletins, photos, etc. which describe the institution and its facilities.

Please attach a brief list of the names and addresses of key individuals to whom the following information sent out by UNOLS would apply (Note: The Institution UNOLS Representative receives all):

Ship user information - research ship schedules, ship availabilities, etc.  
(intended for scientists and ship users);

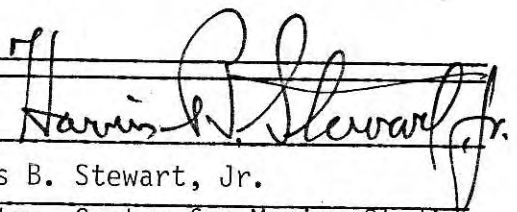
Research ship operations and maintenance - for marine superintendents and port captains.

SEND TO:

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

SUBMITTED:

Signature



Name: Harris B. Stewart, Jr.

Title: Director, Center for Marine Studies

Date: August 16, 1982

Revised 7/82

Addresses:

Ship User Information

Dr. William M. Dunstan, Chairman  
Oceanography Department  
Old Dominion University  
Norfolk, Virginia 23508

Research Ship Operations and Maintenance

Capt. Robert Bray  
c/o Oceanography Department  
Old Dominion University  
Norfolk, Virginia 23508

Note in re number of professional personnel: Within the Oceanography Department there are 15 PhD faculty members. In addition, there are about 50 faculty members in other departments (Biology, Chemistry, Geophysics, Physics, Political Science and Geography, Urban Students, Economics, and the School of Engineering) who are involved to varying degrees in marine science.

Advisory Council Resolution on Orderly Replacement  
of the Fleet, from October 14, 1982 Meeting

We have engaged through the summer in preparation of detailed recommendations for reduction and reordering of the UNOLS fleet. The study brought to our acute attention the continuing importance of orderly replacement of the UNOLS fleet, whatever the availability of funds for science. This requirement must be met in order that marine science continue to progress in the 1990's and after 2000. A replacement schedule must be developed in detail now, and preparation of plans for specific replacements should begin in 1983.

Therefore, we recommend that UNOLS establish a working committee to prepare a detailed replacement schedule. We recommend that the composition of the committee consist of:

- A representative of the UNOLS Members,
- A representative of the UNOLS Associate Members,
- A representative of the Advisory Council, and
- A marine architect associated with the oceanographic community.

The Advisory Council will recruit this panel through its subcommittee on fleet replacement.

Our recommendation anticipates that the following needs will be addressed by the committee:

- 1) An immediate start on planning for replacement of Class A and Class B ships (large, long-range vessels, some of them with special purposes). We must retire some of these by the 1990's. Such ships are essential to our capability for modern oceanography. Planning for replacement must begin now. The committee will prepare and propose mechanisms for drawing specific plans for new platforms.
- 2) A full schedule for replacement of intermediate (C and D) vessels must be prepared. Planning for at least one replacement in the late 1980's must begin now.
- 3) Detailed consideration is required of new means to promote greater cost efficiency, particularly fuel efficiency. We also need specific anticipation to meet the needs of oceanography in the 1990's.

UNOLS should direct its executive secretary to prepare a proposal to NSF/ONR to support the work of the committee. UNOLS should direct the proposed committee to report by the Spring, 1983 meeting of UNOLS on 1) replacement schedule, 2) design directions, and 3) anticipated future scientific needs.

By this recommendation the Advisory Council and UNOLS assure the NSF and ONR that UNOLS is determined to proceed with orderly replacement of the UNOLS fleet. We will ardently pursue a strong operating fleet into the indefinite future.



## UNIVERSITY OF CALIFORNIA, SAN DIEGO

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

SCRIPPS INSTITUTION OF OCEANOGRAPHY

LA JOLLA, CALIFORNIA 92093  
 Cable Address: SIOCEAN, La Jolla, CA  
 TWX: 910-337-1271  
 Telemail: Scripps.Inst

Dr. Derek Spencer  
 Chairman, UNOLS  
 WHOI  
 Woods Hole, Mass. 02543

11 October 1982

Dear Derek:

We write in real concern about the underlying philosophy revealed in the draft report and recommendations of the UNOLS Advisory Council. While many will have written you about individual ships, this letter is intended to draw attention to a major problem that affects all oceanographers equally.

In the UNOLS Advisory Council report, the following facts are stated clearly in the first two chapters. We have no reason to disagree with these statements.

1. Financial support for oceanography has decreased greatly over the past five years. Funds are therefore inadequate to support all of the present ships.
2. The number of challenging and useful problems, and of competent investigators, has increased greatly over that same time period.
3. These new problems are primarily ones that use the large and intermediate ships (classes 1, 2, 3, or classes A, B, C); therefore demand for these ships is likely to increase.
4. "The six vessels in Classes A and B (1&2) are unique national assets, essential to the health and vitality of U.S. oceanography. The permanent retirement, without replacement, of any of these vessels will have deep and harmful effects on the national capability to conduct global research in the oceans and to carry out large-scale multi-investigator research in U.S. waters or adjacent regions."

No such statement as (4) was made about any other class of ships.

5. Use of Class A&B (1&2 in NAS report), which had dropped earlier, has increased significantly from 1981 to 1982, and is predicted to increase in 1983 to 4.7 ship years; it is suggested that 1983 may be anomalously low, and that use may increase even more in 1984. Projecting the 1981-83 use to 1984 suggests a demand for 5.6 ship-years; conversion of Atlantis II for Alvin-tending will reduce available time to 5.3-5.5.
6. Use of the present 7 Class C (class 3) intermediate ships, which has been close to capacity for some time, is expected to drop in 1982 and 1983 to about 6 ship years.
7. Use of the Class 4 ships (UNOLS 4 Class D ships, plus one Class E) has historically been only at 69% of capacity, and is expected to drop to 38% in 1983.
8. Use of the Class 5 (UNOLS E and F, less one) ships has historically been at only 77% of capacity, and is expected to drop to 62% in 1983. All of these statistics are taken from Table 2b, checked against the original NAS report.

From this, the Council reached the following conclusions, in their recommendations:

- A. Class 5 ships should have their funding mechanism changed, but should continue to be funded at present levels (approximately 60% of full operations), and all should be retained.

B. Class 4 ships should all be retained.

C. Class 3 ships should not be increased to 8 with return of Moana Wave, but instead reduced by one ship in view of projected decrease in demand.

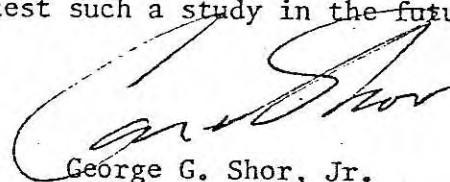
D. Class 1&2 (A&B) ships should be reduced by one, to 5 ships, despite the fact that 1/2 to 2/3 of the time of one of them will be diverted to Alvin tending, and that projections show an increase of use to at least the available time in 1984.

We find it hard to relate recommendations A, B, C, and particularly D to the facts presented in the report and in particular items 5, 6, 7, and 8. We do recognize that another set of statistics, presented later in the report, gives slightly different results; those differences only demonstrate the danger of using such projections.

In an effort to determine the origin of this curious logical progression, we asked some members of the Advisory Council about it. We were told that an additional firm boundary condition used by the Council, vaguely phrased in the report as "recognition of the importance of maintaining bonds between the ship users and ship operations," was really "no present ship operator should lose his last ship." Another way of stating it is that the Council considered that the ultimate good of U.S. oceanography depended upon maintaining the number of institutions operating ships, or the number of members of UNOLS, regardless of any other effects.

We suggest that this decision is outside the competence or charge of the Council, the recommendations are in discordance with the facts that they themselves have presented, and if followed out will lead to the destruction of U.S. oceanography.

We recommend that the report of the UNOLS Advisory Council be tabled. If ONR and NSF wish to have this task completed, or if they request such a study in the future, we suggest that UNOLS is not capable of so doing.



George G. Shor, Jr.  
Associate Director

GGS/dwp

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11 October 1982

MEMORANDUM

To: UNOLS Advisory Council  
 From: Charles B. Miller, Oregon State University  
 About: Export licenses for technologically sensitive equipment

Several investigators from Oregon State and other oceanographic institutes have run into problems recently with the new export regulations developed by the Reagan administration for 'technologically sensitive' equipment. In order to off-load almost any category of electronic equipment in a foreign port, even for transshipment to U.S.-bound carriers, it is now necessary to have a special export license. Most shipping agents and import-export agents are aware of this new requirement and will not handle such equipment without the licenses. Investigators need to be apprised of the need for obtaining these licenses and of the sequence of steps required. Experience in managing these new requirements is still developing both in the oceanographic community and in the government agencies responsible. A preliminary set of steps is as follows:

1. Contact Mr. Michael Kelly, Head  
 Exporter Services  
 United States Department of Commerce  
 Washington, D. C.
2. An application form will be forwarded. This requires a listing of systems to be licensed and provides a complex list of components that are (or may be) in the equipment that are considered sensitive. Some matching of component type code numbers and actual objects is done by the investigator. The application is returned to Commerce.
3. Wait for receipt of the license. The license is granted by a committee which only meets once each 6 months. Therefore, planning for a license must begin about 1 year in advance. The office involved is swamped with applications from all sorts of sources - 10's of thousands. Lead time is essential.

Several institutions have staff who have already handled this problem. Among them are Oregon State and Lamont. I do not have their permission to divulge their names, but may obtain that later.

I recommend that we inform the UNOLS membership of this new, harrassing problem and the means for dealing with it.

1983 - SHIP OPS. FUNDING PROFILES - \$K

APPENDIX X

9/11/82

	1982 COST.	MAY 1982 UNOLS PROJ.		1983 - PROPOSED - (JUNE 82)			
		FULL OPS	REDUCE OPS	TOT	NSF	ONR	OTH
ATLANTIS II	590	2100	2100	2260	1423	382	455
KNORR	2904	3300	3000	3290	2393	641	256
CONRAD	2254	3000	2700	3009	2708	0	301
OCEANUS	1735	1800	1800	1789	1379	143	266
ENDEAVOR	1753	1800	1800	1939	1288	460	191
GYRE	1832	1900	1500	1897	1302	560	35
ISELIN	548	1300	1100	1392	1170	0	222
CAPE HENLOPEX	700	800	800	800	100	0	700
CAPE HATTERAS	1067	1200	1000	1217	753	0	464
CAPE FLORIDA	927	800	800	953	953	0	0
WARFIELD	493	} 900	} 900	484	484	0	0
BLUE FIN	150			168	116	0	52
LONGHORN	208			209	110	0	99
CALANUS	201	200	200	214	157	0	57
[Tot EAST]	15362	19100	17800	19621	14336	2186	3098
MELVILLE	2051	2300	2300	3294	2769	394	131
WASHINGTON	2515	2000	2000	2359	2131	0	227
THOMPSON	2224	2000	2000	1788	904	753	131
WECOMA	1578	2100	1900	2144	1892	222	30
NEW HORIZON	1512	1400	1200	1450	1177	0	273
KAWA KEOKI	1276	1300	700	1504	1092	412	0
ALPHA HELIX	1250	1600	1300	1680	1585	0	95
VELERO IV	651	800	800	919	919	0	0
E.B. SCRIPPS	405	500	400	438	224	30	184
CAYUSE	480	500	500	461	327	45	89
ONAR	116	100	100	119	106	0	13
HOH	18	100	100	43	39	0	4
[Tot WEST]	14076	14500	13100	16199	13165	1856	1177
TOTAL ALL	29438	33600	30900	35820	27502	4042	4275

PROJECTED 1983 FUNDING - \$ NSF ONR OTH TOT  
 21,800 3100 4275 29175

SHORTFALL FROM PROPOSED - \$ 5702 942 -0- \$6645K



REPORT FROM OCT. 1982 E.W. SHIP SCHED. MEETING

	1982 COSTS	OP. DAYS	PROJECTED 1983 COSTS			
			NSF	ONR	OTH	TOT
<u>East Coast</u>						
ATLANTIS II	590	129	1057	382	455	1894
KNORR	2904	298	2286	641	256	3183
CONRAD	2254	244	2270	-	117	2387
OCEANUS	1735	262	1380	143	266	1780
ENDEAVOR	1753	268	1097	446	332	1899
GYRE	1832	270	735	175	980	1890
ISELIN	548	200	1232	-	65	1297
CAPE HENLOPEN	700	200	134	8	646	788
CAPE HATTERAS	1067	250	832	48	342	1220
CAPE FLORIDA	927	190	789	63	63	915
WARFIELD	493	145	435	-	-	435
BLUE FIN	150	210	116	-	52	168
LONGHORN	208	102	-	-	104	104
CALANUS	201	142	156	-	57	213
tot	15,362		12,519	1,906	3,735	18,160
<u>West Coast</u>						
MELVILLE	2051	282	1500 <sup>+800 DPP</sup>	200	850	3300
WASHINGTON	2515	212	1500	600	400	2500
THOMPSON	2224	186	930	775	95	1800
WECOMA	1578	257	1610	209	29	1850
NEW HORIZON	1512	212	1160	100	230	1490
KANA KEOKI	1276	278	670	130	680	1480
ALPHA HELIX	1250	226	1600	60	120	1780
VELERO IV	651	175	819	0	141	960
E.B. SCRIPPS	405	102	200	110	006	316
CAYUSE	480	175	300	30	150	480
ONAR/HOH	134	275	155	-	17	172
tot	14,076		11,240	2,210	2,718	16,168
TOTAL ALL	29,438		23,759	4,116	6,453	34,328



10/14/82

1983 SUMMARY  
\$MJUNE 1982 PROPOSALS

	NSF	ONR	OTH	TOT
E	14.3	2.2	3.0	19.6
<u>W</u>	<u>13.2</u>	<u>1.8</u>	<u>1.2</u>	<u>16.2</u>
Tot	27.5	4.0	4.2	35.8

OCT. 1982 MEETING

E	12.5	1.9	3.7	18.2
<u>W</u>	<u>11.2</u>	<u>2.2</u>	<u>2.7</u>	<u>16.2</u>
Tot	23.7	4.1	6.4	34.3

ANTICIPATED FUNDING

OFS	21.8			
DPP	<u>0.8</u>			
	22.6	3.5	6.4	32.5

SHORTFALL

<u>1.1</u>	<u>0.6</u>	<u>0</u>	<u>1.7</u>
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