UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

SUMMARY REPORT OF THE OCTOBER 1983

SEMIANNUAL MEETING

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

CONTENTS

October 1983

Summary Report of Semiannual Meeting

October 26, 1983

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General: Issues and items considered at the October, 1983 Semiannual Meeting are reported in the order that they were addressed. Unless otherwise noted, all items are from the published agenda (Appendix I).

Before and during the meeting, registration forms were available to attendees together with information distributed through the UNOLS Office: UNOLS Directory and List of Research Vessels. Registered attendees are listed in Appendix II. The Directory and List of Research Vessels are Appendices III and IV.

Introduction and Welcome: The UNOLS Semiannual Meeting, October 1983 was called to order by Chairman, Dr. Ferris Webster. After welcoming the UNOLS membership, speakers, guests, agency representatives and others from the oceanographic community, Dr. Webster introduced UNOLS officers and members of the Advisory Council:

UNOLS Executive Committee

Ferris Webster, Chairman, UNOLS
Joseph R. Curray, Vice-Chairman, UNOLS
Charles B. Miller, Chairman, Advisory Council
William D. Barbee, Executive Secretary, UNOLS

UNOLS Advisory Council

Charles B. Miller, Chairman
Harris B. Stewart, Jr., Vice-Chairman
Robert W. Corell
Robertson P. Dinsmore
Donn S. Gorsline
Roger Larson
Bruce Robison
John C. Van Leer

National Association of State Universities and Land-Grant Colleges (NASULGC): Chairman Webster introduced the first principal speaker, E. Arthur Trabant, President, University of Delaware and Chairman, Marine Division, NASULGC: President Trabant described the Marine Division of NASULGC, its history, purpose, organizational structure and method of operation.

The parent organization, NASULGC, which includes 142 institutions, is action oriented. *It:*

catalyzes action by bringing the collective strength of its entire membership to bear on educational and scientific issues;

focuses public attention on the contribution that universities make through teaching, research and extension;

informs Congress and other branches and units of the Federal government of its members' views on legislative issues affecting higher education; and

links its members to other public and private action groups in accomplishing objectives of mutual interest.

NASULGC activities in support of marine affairs were implemented in 1980 with the establishment of the Marine Affairs Committee (MAC), charged *to strengthen and enhance the university/ocean sector relationship which ..... has become of profound importance.* Most of MAC's concern was with the Federal budget and legislative processes. In 1982 the Marine Affairs Committee was succeeded by a Provisional Marine Division (and in November 1983 the Marine Division was fully recognized). *The purpose of the Marine Division is to formulate plans and programs for the conservation, development, and understanding of marine and coastal environments and to encourage their adoption in the formulation of national public policies.*

President Trabant advanced the Marine Division, NASULGC, as a logical meeting ground for efforts to promote marine science and education. It combines an institutional perspective with program development, access to the public policy process, and the opportunity for interchange with other university officers. His full remarks are in Appendix V.

UNOLS Advisory Council Report: UNOLS Advisory Council Chairman, Dr. Charles Miller reported on the activities of the Council since the last UNOLS Meeting, May, 1983.

The Council met twice, in July, 1983 at Durham, New Hampshire and again on October 24, in Washington, D.C.

At their July Meeting, the Council moved to establish *The UNOLS Newsletter.* The *UNOLS Newsletter* will be published about quarterly, through the UNOLS Office. It will limit its coverage to UNOLS matters (e.g., UNOLS activities, schedules, ship utilization, funding projections) and will be mailed to more than 600 addressees, including UNOLS member institutions. *Donn Gorsline, Advisory Council member, collected and edited information for the first issue, available November, 1983.*

UNOLS fleet replacement remains of prime interest to the Advisory Council. The Council is especially concerned that *many* of the ships (and most of the larger ones) in the UNOLS fleet have reached mid-life (15 years) within the last five years and will be candidates for replacement in the 1990's. This issue will be addressed by the *UNOLS Committee on Fleet Replacement*, Captain Robertson P. Dinsmore, Chairman, whose report will be heard later today.

Dr. John Van Leer, Advisory Council member, has advanced a report on *Platform Design Ideas* that stresses the need to utilize individual ship replacement efforts as opportunities to explore innovative approaches to research ship design. The Council has transmitted Dr. Van Leer's report to the UNOLS Fleet Replacement Committee.

Access for Ocean Research in waters under the jurisdiction of foreign states remains of concern to the Council. The Council has directed the UNOLS Office to aid others in collecting information on international restrictions and the clearance process.

The Council continues to investigate UNOLS community interest in establishing *Cooperative Instrumentation Centers for Oceanographic Research* (CICOR's). Roger Larson, Advisory Council member, has conducted an informal survey of East Coast UNOLS institutions on individual institutional interest in CICOR's and potential modes of management for them.

Advisory Council efforts toward assessing *Fleet Effectiveness* continue, principally through the use of UNOLS Cruise Assessment Forms. The use of these forms has been endorsed by the Oversight Committee to the National Science Foundation's Oceanographic Facilities Support Section:

These forms have provided a positive feedback to both the operators and to the funding agencies, and the information has been beneficial to both. The operators have responded immediately and positively to remedy problems with the ships, crew, and equipment; and both OFS and ONR have responded positively by emphasizing funding for maintenance and upgrading. The result has been a dramatic improvement in efficiency and cost-effectiveness of operation. A quick perusal of Cruise Assessment forms for the past year suggests that less than 5% of cruise legs suffered any loss of science time due to operator, ship, crew, scientific support equipment or operator-supplied instrumentation.

The Advisory Council, at its October 25 meeting, received from NSF/OFS and accepted the following charge concerning potential replacement of the VELERO IV at the University of Southern California:

Review the USC report in the fullest context of scientific needs for vessel support by the institution, by the oceanic region to be served by the vessel, and, in your opinion, by the ocean science community at large, and provide the National Science Foundation with your recommendation on whether the (replacement) vessel should be included in the UNOLS fleet.

In advancing that charge, Mr. R. R. La Count noted that the OFS Oversight Committee had recently recommended that UNOLS should review proposed changes to the academic fleet, specifically:

We recommend that all major actions involving the composition of the academic fleet be sent to the UNOLS Advisory Council for their recommendations.

The Council heard and discussed the University of Southern California's draft report on Research Vessel Replacement together with the report of an on-site review of the ship and USC's conversion plans by Advisory Council member Robertson P. Dinsmore. On consideration, the Advisory Council delivered to NSF/OFS their following recommendation:

The UNOLS Advisory Council, at the request of OFS, reviewed the report from USC to replace Velero IV with a 220 ft. tuna seiner (M/V Osprey) to be purchased from Ralston Purina Co.

An on-site review of the ship and conversion plan by one of our members has resulted in a considered report upon which we base much of the opinion which follows:

1) We commend USC for responding to the Advisory Council recommendation of March 1983 that Velero IV be replaced in the relatively near term.

2) Conversion costs projected by USC appear to be unrealistic by a factor of 1.8 to 2.0. Therefore, OFS should not promise to underwrite conversion costs on the basis of present USC estimates.

3) Choice of M/V Osprey would provide UNOLS West Coast users with much more A + B Class ship capacity than appears to be justified by the present demand. The M/V Osprey would certainly have operating costs well above those projected by USC. Fuel consumption and crew costs will surely exceed USC's estimates.

For both of these reasons we cannot recommend that OFS support further development of the Osprey plan.

4) We recommend that UNOLS, USC, and OFS pursue Velero IV replacement along other lines. In particular they should seek a ship that will provide better sea-keeping and longer range than Velero IV, and that will fit the definition of a UNOLS Class C vessel. Velero IV replacement plans should be developed in consultation with the UNOLS Fleet Replacement Committee.

The Chairman concluded his report by describing the Advisory Council's rationale for recommended Charter Revisions. The Council accepted as charter revision issues questions concerning membership in UNOLS and concerning individual ship inclusion in the UNOLS fleet.

The membership issue included several facets: Are the criteria for the various UNOLS membership criteria appropriate? Does the current membership adhere to existing criteria? Are additional conditions on membership advisable?

Even though ships are of critical importance to UNOLS, neither the UNOLS fleet, UNOLS ships nor conditions for their inclusion are explicit in the Charter. The Council agreed that if UNOLS is to be a mechanism for determining standards of performance for the UNOLS fleet, some definition of

ships is needed as a basis for inclusion in the fleet. The Council also agreed on the need for validation and review mechanisms both for UNOLS membership and UNOLS ship designation.

When the Council's preliminary recommendations were circulated to the UNOLS membership, (August 19, 1983) two kinds of responses resulted.

One set of responses concerned the criteria and conditions advanced for UNOLS membership, or questioned either the need for designating (ship) elements in the UNOLS fleet or the conditions that were recommended. These responses were considered by the Council in reaching their final recommendations (circulated September 22).

A second set of responses questioned the processes by which UNOLS and its various elements act and set policy. Specific assertions were made that the Advisory Council has usurped prerogatives from UNOLS membership and that the Council often acts beyond its mandate. The Council deferred consideration of these questions, noting that constraining the Advisory Council role would require establishment of some alternative action arm; that these issues were beyond the scope of the Council's current Charter review, and that the sense of the assembled UNOLS membership should be sought to determine the need for such fundamental Charter revisions.

The Advisory Council reviewed applications and recommended for Associate Membership:

Naval Post Graduate School, Monterey, CA; and

Louisiana Universities Marine Consortium (LUMCON), Chauvin, LA.

The individual applications will be circulated to UNOLS members for their action.

UNOLS Charter Revision: The Chairman, UNOLS introduced revisions to the Charter as recommended by the Advisory Council. Before reading the recommended revisions he outlined the rules to be followed. In summary:

1. Procedures outlined in the UNOLS Charter for amending the Charter have and will be followed (i.e., changes have been submitted at least 30 days in advance, and changes must be approved by two-thirds vote of UNOLS Member Institutions). This last is interpreted to mean two-thirds of Member Institutions present or absent, thus 12 affirmative votes are required for passage.

2. Only those revisions already circulated will be introduced and considered, and no significant changes will be allowed to the recommended revisions. (One of the recommended changes included an inconsistency in voting procedure, for which a correction will be allowed.)

3. Full discussion is allowed on individual changes or the package as a whole.

The Chairman then read the proposed Charter revisions as included in the Chairman, Advisory Council's letter distributed in September, 1983 (Appendix VI).

The individual changes were then introduced:

Addition to paragraph (d) of section 2 on organization:

The Advisory Council periodically will review the lists of Member and Associate Member Institutions. It will recommend to UNOLS additions, status changes and terminations on the basis of the Member Institution and Associate Institution definitions. Changes will be considered at a regular UNOLS meeting and require a vote of the Member Institutions present or by proxy if absent.

This revision was modified from the version circulated by deleting the word *majority* modifying vote in the last sentence. This made the change consistent with other parts of the Charter.

Addition to paragraph (d) of Section 2 was accepted by Member vote.

Revise paragraph (1) of part (e) of section 2 to read:

(e) *UNOLS institutions are divided into two groups to reflect a distinction between operators and non-operators of significant, shared, oceanographic facilities.*

(1) *Member Institutions conduct graduate academic programs in the marine sciences and operate UNOLS vessels (defined below) or National Oceanographic Facilities (Annex II) for academic purposes, and for which a significant proportion of the funding is provided by the federal government. Member Institutions agree to operate their UNOLS vessels in accord with UNOLS safety standards, to participate fully in the UNOLS scheduling process, and to meet cost accounting and performance standards according to the UNOLS uniform procedures. Facilities operated by Member Institutions as UNOLS vessels or National Oceanographic Facilities are regularly available to users outside of the operating institution when funding is provided by the sponsor of the intended research or by the user.* Institutions will normally be expected to show evidence of three or more years of continuous operation of shared research facilities in order to qualify for membership. Election as a UNOLS Member Institution will be considered by the Advisory Council upon receipt for evaluation of a written application indicating their facilities *qualifying as a UNOLS vessel or vessels or National Oceanographic Facilities*, the graduate level research and academic program of the institution, its history as an operator of shared significant facilities, and a projection of the use of facilities for the next year, including user charges. Elections to membership will be held at a *regular* UNOLS meeting and require a majority vote of the Member Institutions present or by proxy if absent.

During discussion the question was raised as to whether an institution could qualify as a Member by operating a National Oceanographic Facility (which might not be seagoing) even though the institution didn't operate ships. The response was that an institution could qualify in that manner.

Revised paragraph (1) of part (e) of section 2 was accepted by Member vote.

Revise paragraph (2) of part (e) of section 2. to read:

(2) *Associate Institutions conduct academic programs in the marine sciences* and use on a recurrent basis, but do not necessarily operate, seagoing oceanographic facilities for academic purposes. Election as UNOLS Associate will normally be done after submission of a written application to the Advisory Council for evaluation of the institution's academic programs and its probable involvement in UNOLS activities. Election will be made at a *regular* UNOLS meeting by a vote of UNOLS institutions. A simple majority vote of UNOLS Member and Associate Institutions present or by proxy if absent will be sufficient for election.

Revised paragraph (2) of part (e) of section 2 was accepted by Member vote.

Add as paragraph (g) under section 2:

UNOLS Vessels are a defined part of the fleet of research boats and ships operated by academic institutions in the United States. Qualifying vessels are seagoing ships that are greater than 20 m length overall, operate in accord with performance and safety standards established by UNOLS, are scheduled by established UNOLS procedures, are operated by UNOLS Member Institutions, and are so designated by UNOLS.

Discussion of the proposed addition of paragraph (g) centered largely on the final phrase "....and are so designated by UNOLS. Some representatives believed the phrase to be redundant or to constitute double jeopardy; other representatives suggested that or a similar phrase is needed to control the entry of new ships into the UNOLS fleet.

Additional paragraph (g) under section 2 was rejected by Member vote.

Revise paragraph 1. of ANNEX II, National Oceanographic Facilities:

In addition to regular institutional UNOLS facilities there may be identified National Oceanographic Facilities, defined as those facilities, specialized and otherwise, that are made available for the use of qualified scientists from any institution and the use of which shall be *recommended* by a UNOLS Review Committee.

Revised paragraph 1. of ANNEX II, National Oceanographic Facilities was accepted by Member vote.

The floor was then opened to discussion on additional potential changes to the Charter.

Early discussion centered on the need for a definition of UNOLS ships to substitute for the one just rejected. *A motion was approved to introduce for adoption a definition of UNOLS Vessels identical to paragraph (g) under section 2 except with the final phrase "and are so designated by UNOLS." deleted.* The Executive Secretary was directed to submit the change to UNOLS

Members by mail ballot. The rest of the discussion was to the issue of Advisory Council roles relative to individual and collective roles of designated UNOLS Institution representatives, the Executive Council and other UNOLS elements. The sense of the discussion was that there is an issue concerning these roles but satisfactory solution is not apparent within the existing Charter. Further discussion was deferred to Executive Session at the end of the meeting.

ALVIN Program: Robert Corell, Chairman, ALVIN Review Committee, reported on the ALVIN/ATLANTIS II conversion, on procedures for long-range planning, and on potential use of the Navy-operated submersibles SEACLIFF and TURTLE.

ALVIN/ATLANTIS II modification is nearly completed, and this new combination will provide the community with a magnificent, exciting facility. It will allow diving operations almost anywhere in the world and should increase research diving capabilities significantly.

The system should be available for operations January 4, 1984--significantly later (2-3 months) than earlier estimates. The Woods Hole Oceanographic Institution operators have discussed the delay with individual P.I.'s to reach a revised schedule. Revised schedules will be distributed by the first of the year.

Procedures for long-range planning are being developed in conjunction with UNEPC, and are being implemented. For ALVIN/ATLANTIS II, planning procedures will be to gather information and make recommendations concerning general operating areas, etc. two and three years in advance. The procedures rely on notices of intent or interest together with Workshop presentations (from P.I.'s) to provide planning information. The first workshop, held in December, 1982, garnered information on which to project 1984, 1985 operations in the Central and Western Pacific. UNEPC and ARC will conduct two workshops (December, 1983 and January 1984) that will address operations for 1986 and 1987.

The ALVIN Review Committee has recently been trying to promote use of the Navy-operated submersibles SEACLIFF and TURTLE by the academic research community. The Navy has expressed interest in cooperative use, especially in a statement by the Chief of Naval Research. SEACLIFF and TURTLE availability would provide additional facility for deep submersible research, and beginning in mid-1984 the SEACLIFF will provide the capability for research to 6000 meters depth. Despite these obvious advantages, the ARC has not been highly successful in promoting SEACLIFF/TURTLE use. Nevertheless, interest in and efforts to promote utilization will continue.

UNOLS National Expeditionary Planning Committee (UNEPC): Chairman George Shor reported on the first UNEPC meeting, held October 25, 1983. The meeting, essentially organizational, defined Committee roles, planned meetings for the year, and directed distribution of announcements for workshops, etc. Minutes of the first meeting (Appendix VII) list Committee Members and define procedures.

It is not UNOLS' intent, nor will UNEPC attempt to schedule all ships for all times. UNEPC will try to identify (in a timely manner) difficult ship requirement or scheduling problems, to provide consultation between users and operators and to formulate and recommend schedules to solve critical problems.

The two workshops organized in conjunction with the ALVIN review Committee will be at the Fall AGU meeting in San Francisco and the Ocean Sciences meeting in New Orleans. Two workshops will be held to reach a broad spectrum of oceanographers and to provide information on a broad range of potential investigations.

The next UNEPC meeting will be held at about the time of the East Coast Ship Scheduling Meeting (Spring, 1984) in Washington, D.C.

New Ships to Broaden Our Oceanographic Capabilities: *Before introducing Dr. Allyn C. Vine, Scientist Emeritus, Woods Hole Oceanographic Institution, the meeting's second principal speaker, Chairman Webster offered UNOLS' and his own congratulations to Dr. Vine on his recent induction into the National Academy of Engineering.*

Dr. Webster noted that the subject of new ships is of compelling interest to UNOLS, and that Al Vine, through a career of innovation and engineering accomplishment is perhaps the community's most appropriate member to provide insight into real needs and approaches.

Dr. Vine characterized the scientific community's ship requirements as the need to broaden oceanographic research capabilities. In the past, FLIP was designed to fill the need for a stable observing platform at the surface, ALVIN provided depth capabilities and KNORR/MELVILLE provided maneuverability and the ability to hold station. Each broadened the research community's ability to study the ocean.

The concept of fleet replacement is an objectionable one, in that it implies the replacement of individual units as they become old or outmoded. Rather, UNOLS should think of fleet development wherein elements are added to the fleet that will provide additional observational and research capability, thus making the ocean research enterprise more effective. The UNOLS approach should be one of flexibility, blending innovation and conservatism to provide ship designs that will serve science. Since ships must work in the ocean, they must be designed for the ocean.

Development of the academic fleet must be a partnership effort among federal funding agencies, Congress and academic institutions. UNOLS, as a federation of oceanographic institutions, should exploit its breadth and versatility to help formulate a fleet development program that will serve science and provide opportunity for experimentation and innovation in ship design.

UNOLS Committee on Fleet Replacement: Captain Robertson P. Dinsmore, Chairman, Committee on Fleet Replacement, reported on committee formation and progress to date. Members are:

George Keller, OSU	Worth Nowlin, TAMU
John Martin, MLML	Fred Spiess, Scripps
David Menzel, Skidaway	Derek Spencer, WHOI

The issue of fleet replacement is not a new one. It has been a high priority in UNOLS for some time, and will remain critical until resolved. It is of interest that the *1983 Federal Fleet Study* by the Federal Oceanographic Fleet Coordinating Council reaches conclusions parallel to UNOLS': that the U.S. research fleet is getting old (and could comprise a crisis in the 1990's) and no replacement program has yet been developed. The FOFCC considered the academic (or UNOLS) fleet as a part of the federally funded research fleet.

The UNOLS Fleet Replacement Committee task has been identified:

to define problems in fleet retirement and replacement, especially the crisis in the 1990's;

to verify ship requirements;

to develop required ship capabilities, types, sizes and fleet mix; and

to develop a scheme to meet the needs.

In short the task is to develop a UNOLS fleet with the best possible mix of ships.

The Committee will use a two-stage approach. In the first, requirements will be identified and verified, needs determined, various hull and platform configurations examined and evaluated and several conceptual designs will be sponsored. This first stage will include a community-wide workshop. The second stage will be to develop a coordinated plan of vessel replacement and construction, and to sponsor preliminary designs to merit priority needs.

Since the UNOLS fleet faces some immediate problems in ship replacement, the Committee has an additional role: to examine current plans that might affect fleet composition (e.g., plans for a VELERO IV replacement).

Captain Dinsmore and the Committee were alerted to plans by the University of Texas to have a ship built for geology and geophysics and general oceanography and by Scripps to replace the ELLEN B. SCRIPPS.

REPORTS FROM FEDERAL AGENCIES: Mr. R. R. La Count, NSF/OFS, noted that since new budget information had not yet been released and since other issue of interest to his office were addressed in the Agenda, he would not report further. (Releases on NSF's FY-1985 budget are expected in July, and can be included in the UNOLS Newsletter.)

Mr. Keith Kaulum, reported for ONR that there is no final budget for FY-1984 but that the Office is operating under the *75% of previous budget* rule. It is expected that funding for FY-1984 will be similar to that for FY-1983. ONR anticipates a $29M increase for FY-1985, which should enable the full plan for Special Focus Programs (Southern Oceans, Bioluminescence, Sea-Ice Interaction, etc.).

Admiral J. B. Mooney, Jr. is replacing Admiral L. S. Kollmorgan as Chief of Naval Research.

Brochures for Department of Defense Instrumentation Proposals have been mailed, and establish a December 15 deadline for proposals. Decisions will be made for two years.

The first year program has been developed for the Navy's NR-1 submersible. It is mostly devoted to Navy research. When asked about classification problems for researchers wanting to use the NR-1, Mr. Kaulum responded that users must have a security clearance. Further classification policy could be discussed with likely users.

Tom Aldrich reported that USGS use of UNOLS ships in 1984 would be equal to or greater than in 1983. In 1985 and 1986 use is projected at 90 days per year on each coast.

Large Scale Computer Plans of National Science Foundation's Division of Ocean Sciences: Dr. Peter W. Hacker, NSF/OCE, gave background for and a projection of NSF/OCE plans to provide supercomputer capacity for the ocean community. NSF funds large scale computer time to the ocean community through the National Center for Atmospheric Research (NCAR). NCAR has two Cray computers; the ocean community uses about 10% of their time. In their 1982 report, the National Academy of Sciences suggested that one Cray be provided for the use of the ocean community (in comparison to the one fifth now employed). Need in the community is growing because of whole-ocean models, data and information generated by the models, and satellite data (especially when systems reach a production stage) all of which require more computer time and capacity.

NSF/OCE has examined three options: to use OCE funds to buy large scale computer time on the market; to establish an ocean NCAR (with its own Cray); or to build an explicit sharing arrangement with NCAR. About one year ago the OCE executive committee determined to pursue the NCAR sharing arrangement, explicitly defining the option and at the same time establishing high data density satellite links between NCAR and principal ocean community users.

During the same period NSF's Division of Atmospheric Sciences and NCAR have planned to acquire a next-generation computer (at least 5 times faster than the Crays). Approximately fifteen percent is identified for ocean research use.

Currently NSF is seeking to define ocean community demand for super-computers. If required they will buy time on the market to fill interim demands. (See Edward F. Hayes letter of September 27, 1983, Appendix VIII.)

The new generation computer and the high density links should be available in 1985 or 1986.

Report from Research Vessel Operators Council (RVOC): Ms. E. R. Deiter, Chairperson, RVOC reported on RVOC's October 4-6, 1983 meeting and activities during the year.

During 1983 efforts were made to establish RVOC's role in UNOLS more firmly than it had been in the recent past. The Chairperson, RVOC discussed with the Chairman, UNOLS issues for RVOC attention and RVOC advanced recommendations to UNOLS.

The annual Research Vessel Operators' Council meeting was held in Honolulu, Hawaii 4 - 6 October 1983. The meeting was well attended by UNOLS Members and Associate Members. Following federal agency reports, special topics were addressed by guest speakers. Topics covered were Fleet Inspection, Recommended Diving Standards, Navigation Electronics-State of the Art, Marine Insurance, Medical Advisory Systems and Sea Marc II System.

The following two days were spent in workshops including Policies for Chartering UNOLS and non-UNOLS Vessels, Ship Operations, Marine Technician Cost Comparison, and Updating of UNOLS Safety Standards. A tour of the University of Hawaii Ship Facilities concluded the meeting.

A committee was formed to update the 1980 UNOLS Safety Standards. Tex Treadwell of Texas A & M University is chairing this group and would appreciate any recommendations or suggestions from UNOLS or RVOC members. The revised Safety Standards will be presented at the May 1984 UNOLS meeting.

The next annual RVOC meeting will be in the fall of 1984; date and location will be determined later. Agenda items for the meeting are Weather Reporting, specifically Navy Operations, National Oceanic Industry, Manned and Unmanned Submersibles, Jones Act, Stability Computer Programs and Admeasurement Update. Workshops will include Marine Insurance, Fleet Update, User's Manuals and Shared Use Equipment. Any suggestions for additional topics are welcome.

Winch and wire practices together with record keeping for wire use on UNOLS ships became a critical topic at the meeting. It was noted that at present UNOLS has no standard for logging wire use, etc. *The RVOC recommended that UNOLS adopt as a practice for wire and winch documentation Chapter Five of the Handbook of Oceanographic Winch, Wire and Cable Technology, Alan H. Driscoll, Ed., 1982.*

Report of Regional Ship Scheduling Groups: Captain Robertson P. Dinsmore and Dr. John Martin, Chairmen of East and West Coast Ship Scheduling Groups conducted separate and joint meetings of their groups on October 25, in Washington, D.C. Captain Dinsmore reported on the meetings (Minutes are Appendix IX).

Projections for 1984 indicate a heavy ship use year. A total of 5,892 days' use are anticipated. This provides strong schedules for virtually all UNOLS ships. As can be noted from the table of projected funding for 1984, existing operational plans would result in a $3.2M shortfall. That estimate notwithstanding, shiptime requirements of funded research is nearly equal to available shiptime.

East-West Scheduling Meeting - 25 October 1983

1984 Ops/Funding Projections

SHIP	OP DAYS	$ FUNDING ($M) NSF	ONR	OTHER	TOTAL
ATLANTIS II	313	2.20	0.43	0.65	3.28
MELVILLE	258	2.89	- 0 -	0.28	3.17
KNORR	298	2.00	1.00	0.36	3.36
THOMPSON	267	1.84	0.60	- 0 -	2.44
WASHINGTON	268	1.94	1.06	0.08	3.08
CONRAD	325	2.84	0.29	0.14	3.27
MOANA WAVE	110	0.17	- 0 -	0.51	0.68
KANA KEOKI	239	0.45	0.22	0.63	1.30
ENDEAVOR	256	1.08	0.13	0.68	1.90
OCEANUS	265	1.10	0.25	0.40	1.75
WECOMA	242	1.83	- 0 -	0.04	1.87
ISELIN	270	1.50	0.15	0.15	1.80
NEW HORIZON	260	0.21	0.36	1.26	1.83
GYRE	290	0.80	0.40	0.77	1.97
ALPHA HELIX	239	1.76	0.08	0.06	1.90
CAPE HATTERAS	246	1.00	- 0 -	0.30	1.30
CAPE FLORIDA	225	1.00	- 0 -	0.20	1.20
CAPE HENLOPEN	174	0.30	0.02	0.43	0.74
VELERO IV	209	0.75	- 0 -	0.08	0.83
WARFIELD	155	0.55	- 0 -	- 0 -	0.55
CAYUSE	135	0.36	- 0 -	0.12	0.48
E.B. SCRIPPS	146	0.32	0.10	0.01	0.43
LONGHORN	---	---	---	---	---
BLUE FIN	220	0.13	- 0 -	0.04	0.18
BARNES	220	0.14	- 0 -	0.02	0.16
CALANUS	141	0.21	- 0 -	0.03	0.24
(MOORE)	121	- 0 -	- 0 -	0.97	0.97
TOTAL	5892	27.36	5.09	8.26	40.68

In open discussion of ship scheduling and operations, a number of additional items were introduced.

The current trend in winch and wire use toward heavier loads and deeper costs puts extreme stress on wire and equipment. A letter was read to the assembled membership citing a recent equipment loss due to wire failure and calling for UNOLS action to establish comprehensive winch and wire use record keeping.

Availability of research platforms FLIP and ORB was noted to the membership. These two seagoing facilities operated by Scripps are not designated as UNOLS facilities but they each have special research support capabilities, and are available at favorable terms.

Radio station WWD, also operated by Scripps, is available for use by oceanographic research vessels.

Executive Session: At 4:00 p.m. Chairman Webster called a UNOLS Executive Session of representatives of UNOLS Member Institutions, UNOLS elected officials and UNOLS staff. Federal agency personnel, guests and observers were excused.

The Executive Session consisted of an open discussion of the role of the Advisory Council to other elements of UNOLS. In particular, the issue was raised of the Council giving advice and recommendations directly to sponsoring agencies. The sense of the discussion was that if it is feasible to do so, advice to external organizations should be from UNOLS, not from the Advisory Council or other elements. However, in those instances where they are obliged to advise or recommend directly, the Advisory Council should explicitly characterize their advice as Council action.

The meeting was adjourned at 5 p.m.

UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM
SEMIANNUAL MEETING
AGENDA

0830, Wednesday, October 26, 1983
Cosmos Club Auditorium
2121 Massachusetts Avenue N.W.
Washington, D.C.

INTRODUCTION AND WELCOME - Dr. Ferris Webster, UNOLS Chairman

THE MARINE DIVISION OF NASULGC - Dr. Arthur Trabant, President, Marine Division of NASULGC

UNOLS ADVISORY COUNCIL - A Report on Council Activities and the Council's recommended changes to the UNOLS Charter

UNOLS CHARTER REVISION - The Chairman, UNOLS will introduce recommended Charter changes to UNOLS Membership for consideration

REPORT ON ALVIN PROGRAM - Dr. Robert Corell, Chairman, ALVIN Review Committee will report on the status of the ALVIN program for 1984, 1985 and beyond

REPORT ON UNOLS NATIONAL EXPEDITIONARY PLANNING PROCESS - Dr. George Shor, Chairman, UNOLS National Expeditionary Planning Committee will report on Committee organization and planning progress

1200 - 1330 LUNCH 1200 - 1330

NEW SHIPS TO BROADEN OUR OCEANOGRAPHIC CAPABILITIES - Dr. Allyn C. Vine, Scientist Emeritus, Woods Hole Oceanographic Institution

REPORT FROM COMMITTEE ON UNOLS FLEET REPLACEMENTS, ADDITIONS AND RETIREMENTS - Captain Robertson P. Dinsmore, Committee Chairman will report on formation of the Committee and study progress

REMARKS FROM FEDERAL FUNDING AGENCIES - Update forecasts of FY 84/85 ship support and ocean science funding status -- NSF, ONR, NOAA and USGS

LARGE SCALE COMPUTING PLANS OF NSF'S OCEAN SCIENCE DIVISION - Peter Hacker

REPORT FROM RESEARCH VESSEL OPERATORS COUNCIL - Ms. E. R. Dieter, Chairman, RVOC will report on RVOC's Annual Meeting and activities

REPORT OF REGIONAL SHIP SCHEDULING GROUPS-JOINT MEETING - Captain Robertson P. Dinsmore and Dr. John Martin, Chairmen

EXECUTIVE SESSION - RESERVED TO UNOLS MEMBERS AND ASSOCIATE MEMBERS

For further information please contact:

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

(206) 543-2203

UNOLS

The University-National Oceanographic Laboratory System is a planning and coordinating mechanism for oceanographic facilities. It is a joint effort of the academic community and the federal funding agencies, principally the NSF, ONR, NOAA, DOE, BLM 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 facilities 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 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 and the Research Vessel Operator's Council. 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.

UNIVERSITY-NATIONAL

OCEANOGRAPHIC LABORATORY SYSTEM

ANNOUNCEMENT OF AGENDA

UNOLS SEMIANNUAL MEETING

OCTOBER 26, 1983

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.

Ferris Webster, Chairman
Joseph R. Curray, Vice Chairman
William D. Barbee, Executive Secretary

Appendix II

UNOLS Semiannual Meeting
Washington, D.C.
October 26, 1983

Registered Atendees

Richard E. Alderman, NOAA
Thomas C. Aldrich, U.S. Geological Survey
William D Barbee, UNOLS Office
John F. Bash, University of Rhode Island
Nancy Ann Brewster, National Science Foundation
*J. Frisbee Campbell, University of Hawaii
Larry Clark, National Science Foundation
Thomas N. Cooley, National Science Foundation
*Robert W. Corell, University of New Hampshire
*Bruce K. Cornwall, Johns Hopkins University, CBI
Joseph R. Curray, Scripps Institution of Oceanography
*Thomas A. Davies, University of Texas at Austin
*E. R. (Dolly) Dieter, University of Alaska
John D. Donnelly, Woods Hole Oceanographic Institution
Robert G. Douglas, University of Southern California
*Elgin A. Dunnington, University of Maryland
William Erb, Department of State
Robert H. Feden, Naval Research Laboratory
*William Gaither, University of Delaware
*James Gibbons, University of Miami, RSMAS
Graham S. Giese, State University of New York
Donn S. Gorsline, University of Southern California
*George D. Grice, Woods Hole Oceanographic Institution
*James J. Griffin, University of Rhode Island
M. Grant Gross, National Science Foundation
Thomas C. Johnson, Duke/University of North Carolina
*Jay T. Katz, University of Michigan
*Donald L. Keach, University of Southern California
*Henry V. Kennedy, Lamont-Doherty Geological Observatory
Ronald La Count, National Science Foundation

*Brian Lewis, University of Washington
Bruce Malfait, National Science Foundation
*John Martin, Moss Landing Marine Laboratories
John G. McMillan, National Science Foundation
*David Menzel, Skidaway Institute of Oceanography
*Charles B. Miller, Oregon State University
William H. Mitchell, University of Texas at Austin
John C. Mutter, Lamont-Doherty Geological Observatory
*Wadsworth Owen, University of Delaware
Joe S. Pillera, U.S. Geological Survey
Buck Redman, NOAA
*Bruce H. Robison, University of California - Santa Barbara
Alexander N. Shor, Lamont-Doherty Geological Observatory
*George G. Shor, Jr., Scripps Institution of Oceanography
Debra S. Stakes, National Science Foundation
Mitchell Stebens, UNOLS Office
*Harris B. Stewart, Jr., Old Dominion University
Duane M. Tollaksen, Office of Naval Research
Arthur Trabant, University of Delaware
*T. K. (Tex) Treadwell, Texas A & M University
*Joseph F. Ustach, Duke/University of North Carolina
John Van Leer, University of Miami, RSMAS
Allyn Vine, Woods Hole Oceanographic Institution
John B. Watkins, University of Washington
Richard W. West, National Science Foundation
*Terry E. Whitledge, Brookhaven National Laboratory

*Member, Associate Member Representative, at this meeting

6/83

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. Marcus 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. Douglas Caldwell

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
Dr. Arthur E. Maxwell

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

HARBOR BRANCH FOUNDATION
Dr. Robert S. Jones

HOBART & WILLIAM SMITH COLLEGES
Mr. F. Richard Wilkins

LEHIGH UNIVERSITY

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

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

OCCIDENTAL COLLEGE
Dr. John S. Stephens, Jr.

OLD DOMINION UNIVERSITY
Dr. Harris B. Stewart, 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

12/83

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	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 ONAR C.A. BARNES	209/64 65/20 65/20	1965 1954/1963 1966/1983	19 6 6	NAVY NAVY U.W.	Dr. Brian T.R. Lewis 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 90089-0341	VELERO IV	110/34	1948	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 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 (619) 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	Captain T.K. Treadwell Marine Operations Officer (409) 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) 361-4023
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 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	21	NAVY	Mr. Henry (Chip) Kennedy Ship Scheduler (914) 359-2900, Ext. 245
University of Rhode Island Graduate School of Oceanography Narragansett, Rhode Island 02881	ENDEAVOR	177/54	1976	16	NSF	Mr. John F. Bash Ship Scheduler (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 Ops. (617) 548-1400, Ext. 2736

President's Remarks
UNOLS
October 26, 1983

I was asked by Dr. Webster to describe the Marine Division of the National Association of State Universities and Land Grant Colleges often referred to as NASULGC. To understand the raison d'etre of the division, I think it first helpful to characterize the parent organization--NASULGC.

What is NASULGC?

The National Association of State Universities and Land Grant Colleges (NASULGC) is the oldest higher education association in the United States. Its origins go back to 1871 when leaders of the nation's land grant colleges held informal meetings to exchange ideas on common problems. Today, the association, with headquarters in Washington, serves as a cohesive force for that special segment of higher education--the principal state universities and land grant colleges. Its 142 institutions include 72 land grant institutions and 70 public universities and university systems.

The association is action-oriented; it--

1. catalyzes action by bringing the collective strength of its entire membership to bear on educational and scientific issues of common concern.

2. focuses public attention on the contribution that universities make through teaching, research, and extension.

3. informs Congress and other branches and units of the federal government of its members' views on legislative issues affecting higher education--and--

4. links its members to other public and private action groups in accomplishing objectives of mutual interest.

The association's work is supported entirely by member dues. Therefore, it does not suffer from the restrictions placed on organizations receiving support from the federal sector.

Historically NASULGC focused on issues pertaining to food, agriculture, and natural resources. In 1979, the association expanded its mission to also consider matters related to science and education in urban affairs. Until recently an obvious omission in the list of areas benefiting from association actions was marine affairs.

Why is NASULGC the appropriate organization to represent and promote the marine sciences? I share with you the rationale that I presented to members of NASULGC's executive committee:

The Marine Sciences are playing an increasingly important role in our defense (underwater acoustics), in providing petroleum supplies (drilling on the outer continental shelf), in providing food (fisheries and mariculture), and strategic minerals (polymetallic sulfides and manganese nodules). In fact, the Marine Sciences are a growing field of endeavor, and there will be expanding opportunities for our universities in the decades ahead. These opportunities will involve institutions in our inland states as well as the 30 states that touch the oceans, the Gulf and the Great Lakes.

The U.S. higher education community is already committed to the field of Marine Science. Some interesting facts about marine-related activities found in universities:

1. There are 175 U.S. universities with curricula in marine sciences (according to NOAA).

2. There are 150 universities and colleges performing research in oceanography (as defined by NSF).

3. U.S. universities currently spend a total, from all sources, of about $230 million on marine sciences research (as shown by NSF analysis).

4. The federal government provides 80% of university funds ($185 million) with the balance coming from state and local sources ($25 million) and industries, foundations and other private sources ($20 million).

5. Four agencies provide 90% of the federal funds for ocean sciences: NSF, ONR, NOAA, and DOE.

6. There are 19 Sea Grant Colleges. (Two, The University of Florida System and the University of Michigan are not NASULGC members.) In addition, there are seven institutions, three coherent area programs and one project institution in Sea Grant.

7. In addition to the 41 universities receiving Sea Grants from NOAA, about 130 additional universities and colleges receive funds under "subcontracts" from these institutions.

8. As you know, there are 49 universities (17 members; 32 associate members) cooperating in the operating and scheduling of ships in the academic fleet through UNOLS.

9. There are 10 universities organized as JOI (Joint Oceanographic Institutions, Inc.) operating NSF's ocean drilling projects.

It is obvious from these statistics that U.S. universities, including Woods Hole and Scripps constitute the major block of U.S. resources developing new understanding of the oceans. However, the efforts of these institutions have not been organized to effectively influence the public policy process, particularly the allocation of federal funds in support of marine science research and education.

How can this situation be improved? I now turn to a discussion of the Marine Division of NASULGC. I think it helps to recount some of the early developmental history of the division, because the operating philosophy of an organization is often determined by its roots. The Marine Division has grown out of the Marine Affairs Committee of NASULGC. The call for interested university presidents, Sea Grant Association members and others in the creation of a committee designed "to strengthen and enhance the universities' involvement in the marine sector" was made at the 94th annual meeting of NASULGC on November 16, 1980. The outcome of that meeting was the formation of the Marine Affairs Committee (MAC). The charge to the Committee was as follows:

> "To stengthen and enhance the university/ocean sector relationship which, in light of the 200 mile economic zone, the Law of the Sea Treaty implications, etc. has become of profound importance."

The first meeting of MAC was held on February 16, 1981. From the outset, the MAC members were confronted with a broad spectrum of challenges and opportunities. For example, at the first meeting, the federal budgets for FY '81, '82, and '83 were the dominant focus. All projections for federally-supported, University-based marine programs were disappointing; some well-established programs were targeted for total phase-out. In addition to these budgetary concerns, there were discussions regarding university-industry relationships, aquaculture, international programs, and the future outlook of NSF funding for marine science in academia.

The number and scope of issues addressed by the MAC grew with each meeting. However, most of MAC's energies were spent on influencing the federal budget and legislative processes. MAC members provided expert testimony before the congressional committees charged with oversight of marine programs. MAC members met with key congressmen and their administrative aides to reinforce testimony on a one-to-one basis. The federal executive branch was also approached through meetings with agency executives, including two deputy secretaries of commerce. A committee meeting with an OMB budget examiner with responsibility for review of the NOAA budget was particularly helpful in understanding the idiosyncrasies of OMB.

The Marine Affairs Committee directed its energies on behalf of those federally-supported marine programs which were in the greatest jeopardy. For example, initially MAC devoted much attention to the case for the National Sea Grant College Program. Information on the status of the various federally-supported marine programs and the prognosis for their future support was provided to MAC by the Washington staff of NASULGC. I must pause in my accounting of the accomplishments of MAC to reinforce how very important it is to have staff people in Washington "working" the political infrastructure on your behalf.

In additional to the attempts to influence the public policy process, MAC also undertook a survey to locate its constituency throughout the institutions of higher education in the United States.

The original intent of organizing a marine component in NASULGC was to direct the energies of a large and respected association toward those issues of concern to the academic marine community. It has to be impressive to any

potential sponsor to have chief executive officers of 140+ institutions of higher education, including many land-locked universities to speak in support of marine programs. The question: How was the Marine component in NASULGC to position itself in order to elicit such support? NASULGC like any other organization has an organizational hierarchy. Although as a committee MAC had been effective, its influence would have been even greater had it been a division. As I said earlier historically, there was one dominant entity, the Division of Agriculture. Only recently was it joined by the Division of Urban Affairs. The desire was to elevate the marine presence to a division level.

In the spring, 1982, I made a proposal to the NASULGC Senate Executive Committee to establish a Marine Division. After due consideration, on November 7, 1982, the NASULGC Senate Executive Committee approved the establishment of a Provisional Marine Division. To implement this action, the MAC was disbanded and reconstituted as members of the iterim Board of Directors of the Marine Division.

I now want to describe to you this newly formed Division.

Purpose: The purpose of this Division is to formulate plans and programs for the conservation, development, and understanding of marine and coastal environments and to encourage their adoption in the formulation of national public policies.

Membership: Institutions holding membership in NASULGC may become members of the Division upon application of the CEO's.

Institutions not members of NASULGC may become members of the Division, without holding membership in NASULGC, by application of their CEO's, approval by the Division Board of Directors, and payment of an appropriate fee.

The affairs of the Division are conducted by delegates from member institutions; there are three voting delegates from each member institution:

(A) The CEO or institutional head (e.g., presidents or chancellors).

(B) The chief administrative officers (e.g., deans, vice presidents, or provosts).

(C) The Sea Grant directors.

I think it is important to share with you the rationale for this particular composition of delegates for the Division. First, we want to be able to deliver the full force of member institution support. Secondly, we want to have the input of experts in the marine sciences available for comment on marine issues; thirdly, we want to establish an infrastructure capable of networking the marine community to accomplish self-serving goals; for this expertise we turn to the Sea Grant directors who have the most experience in linking together extremely diverse programs.

To continue on with a bit more discussion on organization, there are four standing committees:

(1) The Annual Meeting Program Committee;

(2) Committee on Federal Legislation;

(3) Committee on Federal Budgets; and

(4) Nominating Committee,

and other such committees as are found necessary. We already have committees falling into the "Other" category. These include Fisheries Education Committee, International Committee, and the Sea Grant Task Force.

Rather than bore you with the specific charges of each of these committees, I will single out the Committee on Federal Budgets for discussion. This Committee is responsible for the preparation of recommendations with regard to annual budgets for those programs under the jurisdiction of federal agencies that are of special concern to member institutions including appropriate parts of NSF, ONR and NOAA. After review of these recommendations by the Division Board of Directors and receipt of NASULGC approval, the Committee is responsible for working with the staff in coordinating the presentation of these recommendations to the federal agencies, OMB and both houses of congress.

This Committee established three task forces to work on important budget problems. These subcommittees include: Sea Grant/NOAA, Ocean Pollution, and Vessels.

I might observe that all the members of the Vessels Subcommittee are from universities belonging to UNOLS and are quite familiar with the challenges and needs associated with the operation of a national research fleet.

The composition of the Subcommittee on Vessels is one example of a situation in which UNOLS and the Marine Division is configured in such a way as to be inclusive, not exclusive. We want to involve all those who have a vested interest in the development of marine research and education.

Sometimes the importance of speaking with a common voice is not truly understood or evaluated positively. Early on in the fight for Sea Grant survival, friendly congressional staffers told the Sea Grant directors that the desires of the marine community were easy to thwart because it could be so easily divided. That is, the old divide and conquer routine. To avoid self-inflicted wounds, total network involvement is required. So far, the Sea Grant community has been successful.

I relate this case study to you because broad participation is central to the Division's effectiveness and success. I firmly believe that the Marine Division of NASULGC is a logical meeting ground for efforts to promote marine science and education. It combines the institutional perspective with program development, access to the public policy process, and the opportunity for interchange with other university officers.

There exists one final step in the establishment of the Marine Division; i.e., to remove the modifier "provisional" from the title. A vote will occur on the establishment of a fully accredited Marine Division at the annual meeting of NASULGC November 13-16, 1983. We are anticipating an affirmative vote.

Add as paragraph (g) under section 2:

UNOLS Vessels are a defined part of the fleet of research boats and ships operated by academic institutions in the United States. Qualifying vessels are seagoing ships that are greater than 20m length overall, operate in accord with performance and safety standards established by UNOLS, are scheduled by established UNOLS procedures, are operated by UNOLS Member Institutions, and are so designated by UNOLS.

Revise paragraph 1. of ANNEX II, National Oceanographic Facilities:

In addition to regular institutional UNOLS facilities there may be identified National Oceanographic Facilities, defined as those facilities, specialized and otherwise, that are made available for the use of qualified scientists from any institution and the use of which shall be *recommended* by a UNOLS Review Committee.

any member on written notice to the UNOLS Chairman, and involuntarily terminated by a two-thirds vote of the Member Institutions when that member is no longer considered qualified for that category of membership.

(e) UNOLS institutions are divided into two groups to promote coordination and sharing of facilities and to facilitate information transfer about operating procedures and practices.

(1) Member Institutions operate seagoing oceanographic research facilities for academic purposes, for which the majority of the funding comes from the federal government. These facilities are regularly available to users outside of the operating institution when funding is provided by the sponsor of the intended research or by the user. Institutions will normally be expected to show evidence of three or more years of continuous operation of shared research facilities in order to qualify for membership. Election as a UNOLS Member Institution will be considered by the Advisory Council upon receipt for evaluation of a written application indicating the facilities involved, the graduate level research and academic program of the institution, its history as an operator of shared significant oceanographic facilities, and a projection of the use of facilities for the next year, including user charges. Elections to membership will be held at the Annual Meeting and require a majority vote of the Member Institutions present or by proxy if absent.

(2) Associate Institutions. Academic institutions which conduct graduate level research and instructional programs in the marine sciences and which use on a recurrent basis, but do not necessarily operate, seagoing oceanographic facilities for academic purposes are eligible for election as UNOLS Associate Institutions. Election as UNOLS Associate will normally be done after submission of a written application to the Advisory Council for evaluation of the institution's research and academic programs and its probable involvement in UNOLS activities. Election will be made at the Annual Meeting by a vote of the UNOLS institutions. A simple majority vote of UNOLS Member and Associate Institutions present or by proxy if absent will be sufficient for election.

(f) The Chairman of UNOLS will be elected from among the Member Institutions. The Vice Chairman may be elected from among the Associate Member Institutions. Each will serve for a term of one year and will not serve more than three successive terms. The Vice Chairman will serve in the absence of the Chairman. If neither the Chairman nor Vice Chairman are present at a meeting, the members present shall elect an Acting Chairman for the duration of the meeting.

UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

Excerpts From The UNOLS Charter

ANNEX II

TO THE CHARTER

National Oceanographic Facilities

1. In addition to regular institutional UNOLS facilities there may be identified National Oceanographic Facilities, defined as those facilities, specialized and otherwise, that are made available for the use of qualified scientists from any institution and the use of which shall be determined by a UNOLS Review Committee.

2. A research vessel or other research facility may be designated a National Oceanographic Facility upon the approval of UNOLS institutions after review by the UNOLS Advisory Council, with the concurrence of the owner and operator of the facility and with reasonable assurance of support. National Oceanographic Facilities may be multi or special purpose facilities and may be designated for the entire annual operating period or any significant period thereof.

3. The purpose of National Oceanographic Facilities is:

   - To provide oceanographic vessel and other facility support to scientists who do not operate or have available the required facilities.

   - To provide for the support and use in academic research of specialized and unique facilities.

4. A Review Committee for each facility shall be established for the purpose of considering proposals for facility use and for recommending programs to be scheduled. Members of the Committee shall be nominated by the UNOLS Advisory Council and shall be appointed by UNOLS. Members shall serve for terms of three years on a rotating basis. Each institution operating a National Oceanographic Facility may designate an ex-officio member in addition to those members appointed by UNOLS. The Review Committee shall elect its own Chairman from among the members appointed by UNOLS.

5. In recommending the allocation of facility time the Review Committee shall act primarily on the scientific merit of the proposed research and its compatibility with the individual facility.

6. Operational scheduling of the facility will be the function of the operating institution. The time frame for scheduling generally shall be in accordance with Annex I of the UNOLS Charter.

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, Washington 98195

December 13, 1983

To: UNEPC Members
UNOLS Members
UNOLS Advisory Council
Meeting Attendees

From: William D. Barbee
Executive Secretary, UNOLS

Subject: UNOLS National Expeditionary Planning Committee Meeting

Minutes of the first UNEPC meeting, held in Washington, D.C., October 25, 1983, are attached.

WDB:gm
cc: La Count (10)
Wall (10)
Kaulum (5)
Tollaksen
Gross

UNOLS National Expeditionary Planning Committee Meeting
Washington, D.C.
October 25, 1983

The first meeting of the UNOLS National Expeditionary Planning Committee (UNEPC) was called to order by Chairman George Shor, Jr. at 2:30 p.m. in Suite 300, at National Science Foundation Offices, 1730 K Street NW. Attendees are listed at the end of the report.

Members of UNEPC have been designated as follows:

George Shor, Jr.	Chairman
Robert Corell	Advisory Council Representative ALVIN Review Committee Representative
J. Frisbee Campbell	University of Hawaii
Marcus Langseth	L-DGO, Columbia University
Douglas Caldwell	Oregon State University
James Griffin	University of Rhode Island
Claes Rooth	RSMAS, University of Miami
(George Shor, Jr.)	Scripps, UCSD
T. K. Treadwell	Texas A & M University
Brian Lewis	University of Washington
Jack Donnelly	W.H.O.I.
William Barbee (staff)	UNOLS Office

Attendees are listed in Appendix I.

Initial discussion was devoted to Committee procedures and protocal. It was agreed that:

six Committee members would constitute a quorum;

the Institutions represented can designate alternates; and

the UNEPC mission will be as outlined in the charge to the Committee and in the UNOLS Chairman letter of April, 1983 (see Summary Report of the May, 1983 UNOLS Semiannual Meeting, p. 16 and Appendix XIV).

The Chairman noted that scheduling for most of 1985 will have progressed to the stage of individual principal investigator-institution exchange before UNEPC can become functional. Thus, UNEPC will be implemented with consideration of operations projected for the winter (Austral summer) of 1985-1986.

The Committee was alerted to a letter from the Chairmen, UNEPC and ARC notifying the oceanographic community of Workshops to be held December 4, 1983 and January 22, 1984, to develop planning information for expeditionary investigations and for the ALVIN program (Appendix II). Committee members discussed the Workshops and questioned whether principal investigators would participate. It was suggested that selected funding agencies be asked to describe their program interests for late 1985 through 1987. Chairman Shor will contact ONR, JOI, NSF/DPP and USGS to solicit presentations. (Emphasis will be on plans for Southern Ocean investigations.) Robert Wall noted that, in addition to those Southern Ocean programs already mentioned, NSF has a Transient Tracers proposal pending.

A brief discussion was held on what kinds of investigations should qualify as expeditionary (i.e., would be of interest and appropriate for notification to UNEPC.) While a firm definition was not reached, the Chairman noted that in addition to those obvious projects entailing long-duration investigations in remote areas, the Committee would like to see notification of intent on any investigation where scheduling might be difficult, timing is critical, or requirements repeat on a schedule over several years (e.g., TROPIC HEAT, SEQUAL, WARM CORE RINGS).

A letter from F. K. Duennebier, Chairman, JOI Site Survey Panel, was introduced describing potential site surveys that might employ UNOLS ships (Appendix II).

The Chairman noted that UNEPC is a natural channel for international communications on expeditionary planning status. At such time as the Committee has made significant progress, communications will be established with appropriate planning and scheduling groups in other countries.

UNEPC meetings for the first half of 1984 will be in:

early March, in Washington, D.C. (coordinated with the East Coast Ship Scheduling Group meeting); and

in May in Washington, D. C. (preceeding the May UNOLS Semiannual meeting).

The meeting was adjourned a 5:00 p.m.

Appendix I

Attendees
UNOLS National Expeditionary Planning Committee Meeting
October 25, 1983

UNEPC Members	Affiliation
George Shor, Chairman	Scripps Inst. of Oceanography
Charles Miller (alt. for D. Caldwell)	Oregon State University
T.K. Treadwell	TAMU
John Van Leer (alt. for C. Rooth)	RSMAS, University of Miami
Brian Lewis	Univ. of Washington
Alexander Shor (alt. for M. Langseth)	L-DGO, Columbia University
James Griffin	Univ. of Rhode Island
J. Frisbee Campbell	Univ. of Hawaii
John Donnelly	Woods Hole Oceanographic Inst.
Robert Corell	Univ. of New Hampshire Advisory Council Rep. ALVIN Review Committee Rep.
William Barbee (staff)	UNOLS Office

Observers	
Mitchell Stebens	UNOLS Office
Don Heinrich	NSF/OCE - Geology, Geophysics
Bruce Robison	Advisory Council - UCSB
Bruce Malfait	NSF/OCE - Geology, Geophysics
Bill Mitchell	Univ. of Texas at Austin
Tom Cooley	NSF/OCE/OFS
John McMillan	NSF/OCE/OFS
Nancy Ann Brewster	NSF/AAEO
Grant Gross	NSF/OCE
Richard West	NSF/OCE/OFS
Bob Wall	NSF/OCE/OSRS
Duane Tollaksen	ONR (421 SP)
Keith Kaulum	ONR (421 SP)
Joe Curray	Scripps Inst. of Oceanography
Donn Gorsline	Univ. of Southern California
Robert Douglas	Univ. of Southern California

University of Hawaii at Manoa

Hawaii Institute of Geophysics
2525 Correa Road • Honolulu, Hawaii 96822
Cable Address: UNIHAW

October 17, 1983

Dr. Alexander Shor
UNEP Representative
Lamont-Doherty Geological Observatory
Columbia University
Palisades, New York 10964

Dear Sandy,

In response to your letter of 3 October 1983, I am sending this list of regions for potential JOI site surveys using UNOLS ships.

The following regions are "definite", with RFP's already out or being generated:

1. Peru-Chile margin (Hawaii)
2. Blake-Bahama (decision in December)
3. Gulf of Mexico (RFP being written)
4. Kane Fracture Zone (RFP being written)

and 5. Chile Triple Junction (RFP being written)

Lesser certainty (by an order of magnitude) is appropriate for the regions below:

1. Labrador Sea
2. Costa Rica
3. Equatorial Fracture Zone
4. Venezuela Basin
5. Mediterranean
6. Weddell Sea

In the "wish list" category are the regions shown on the enclosed map from the JOIDES Site Survey Panel. The map shows regions of international interest, not necessarily regions to be surveyed by U.S. ships.

Note also that with the panel structure changing, and new people joining them, the regions are very likely to be redefined to some extent.

Please let me know if I can be of any more help.

Sincerely,

Frederick K. Duennebier
Chairman, JOI Site Survey Panel

FKD:kmr
Encl

cc: Dr. G. Shor, SIO

Figure 2.

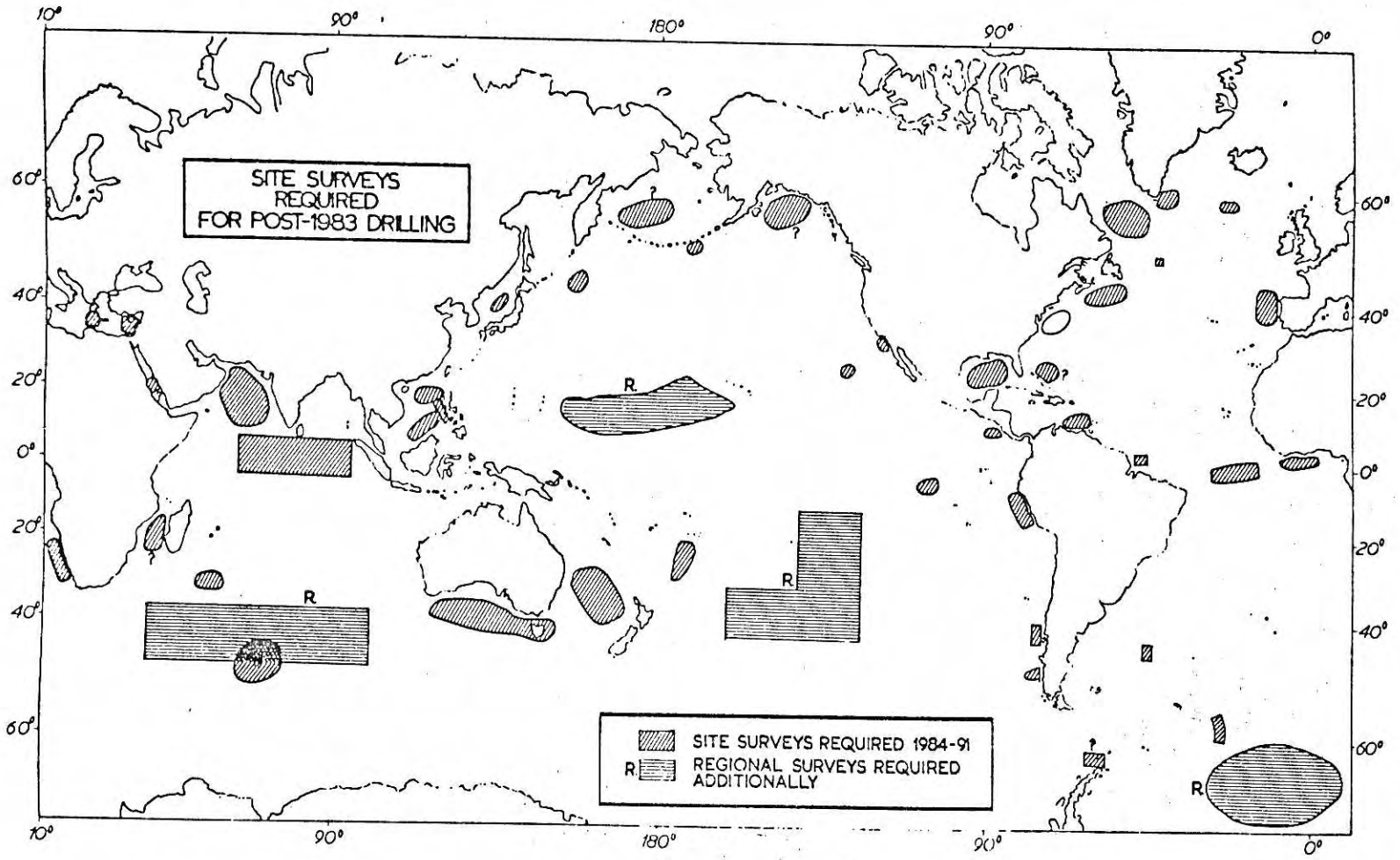

Figure 3.

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

September 27, 1983

Dear Awardee:

Several recent studies and workshops have presented clear evidence that access to Class VI computer systems, particularly in the university community, will significantly enhance progress in many areas of scientific and engineering research and education. Thus, as part of its mission to ensure the health of U.S. science, the National Science Foundation is taking immediate steps to improve supercomputer access in the university community.

The Foundation plan for Fiscal Year 1984 is intended to be the first step in a longer-term effort to provide the research community with significantly improved access to advanced large-scale computers. There are two main elements to this plan. The first involves the receipt, evaluation, and funding of proposals from individual principal investigators or groups for access to Class VI machines and appropriate ancillary costs, e.g., local equipment, travel, and communication. The second element is to arrange for large blocks of such computer services that can be made available to the most meritorious NSF projects.

The purpose of this letter is to request information and to encourage the submission of proposals from NSF grantees and contractors who might benefit from improved access. Proposals should be organized in accordance with "Grants for Scientific and Engineering Research" (NSF 83-57). In some instances, a preliminary phase for software conversion and code development may be appropriate, to be followed by a longer-term, production-oriented phase. Separate budgets should be submitted for the two phases and may include ancillary costs. Requests for computer time should be stated in equivalent CPU hours on a particular Class VI machine. It is anticipated that most awards will contain specific allocations at computer facilities with awards from the Foundation.

To assist the Foundation in the evaluation of your request, please describe your prior experiences with Class VI machines and state why access to such machines is essential for the successful completion of your project.

Please contact your Program Officer directly if you need additional information.

Yours sincerely,

Edward F. Hayes

Edward F. Hayes
Chairman
Supercomputer Task Force

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, Washington 98195

December 7, 1983

To: East Coast Ship Scheduling Group
West Coast Ship Scheduling Group
UNOLS Members
UNOLS Associate Members
Federal Agency Representatives

From: William D. Barbee
Executive Secretary, UNOLS

Subject: Report of the Joint Meeting of the East and West Coast Ship Scheduling Groups, October 25, 1983.

This distributes the Report of the separate and joint meetings of the East and West Coast Ship Scheduling Groups held October 25, 1983. The results of the meetings corroborate earlier projections that ships in the UNOLS Fleet will be more heavily used in 1984 than in any recent year. However, the schedules for a few ships (or institutions) are significantly dependent on projects for which funding is not yet secured.

This report will be appended to the Minutes of the October 26, 1983 UNOLS Semiannual Meeting.

WDB:gm
cc: Advisory Council
Attendees

EAST COAST SHIP SCHEDULING GROUP
WEST COAST SHIP SCHEDULING GROUP
REPORT OF JOINT MEETING
October 25, 1983

The East and West Coast Ship Scheduling Groups met for separate meetings at the National Science Foundation (1730 K Street NW and 1800 G Street NW) on October 25, 1983. Attendees are shown in Attachment 1.

Individual meetings for the two groups were called to order at 9 a.m. by their respective Chairmen, Robertson Dinsmore (East) and John Martin (West). The two groups met jointly at 1 p.m.

1. Ship schedules, operations, costs and agency support were quickly reviewed. The reviews revealed only modest changes in estimates for the total cost of 1983 operations from estimates provided in February and May, 1983.

2. Ship schedules, operations, costs and agency support for 1984 were next projected by individual institutions, and discussed and summarized. (Attachment 2, East and Attachment 3, West.)

Projected ship use days for 1984 remain almost 25% greater than for 1983. Projected funding includes $25-27M (67%) from NSF, $5M (12%) from ONR and $8M (20%) from other federal and state agencies. (The Other category includes approximately $1M NSF funds anticipated through Joint Oceanographic Institutions, Inc.)

Although in many respects, the assembled UNOLS Fleet schedule is well defined, a number of problems exist: A large part of the ALPHA HELIX (University of Alaska) schedule is still tentative pending decisions to be made within NSF's Division of Polar Programs. Pending decisions concerning rehabilitation and modification of the MOANA WAVE and the scheduling for replacing KANA KEOKI make the University of Hawaii's projected schedule tentative. Adjustments to the scheduling of South Atlantic investigations have resulted in a GYRE schedule that leaves the ship in the South Atlantic, facing unproductive transit time. Schedules from other institutions include uncertainties of from 2-15% related to pending funding decisions.

These problems and uncertainties notwithstanding, there is the real possibility that in 1984 the shiptime requirements of funded research might exceed the available (or funded) shiptime; i.e., a small number of funded researchers could be left on the dock. The critical match in 1984 between projections of ship requirements and funded shiptime is illustrated in the following tables on Projected 1984 Operations and Funding and on Profiles of Funding Cycles. Note especially: the dramatic increase in operating days projected for 1984 over the average for 1981-1983; the 1984-1983 increase in funding anticipated in each of the funding source categories; and the $3.2M shortfall anticipated on the basis of projected ship use.

EAST-WEST SCHEDULING MEETING
25 OCTOBER 1983

Projected 1984 Ops and Funding

	OP DAYS	$M NSF	$M ONR	TOTAL	TOTAL
EAST COAST	3299	14.71	2.67	5.13	22.51
WEST COAST	2593	12.65	2.42	3.13	18.20
TOTAL	5892	27.36	5.09	8.26	40.71
ANTICIPATED FUNDING		25.0	4.5	8.0	37.5

SHORTFALL: $3.2M

PROFILE OF FUNDING CYCLES

	OP DAYS	$M NSF	$M ONR	$M OTHER	$M TOTAL	SHORT-FALL
1981	4501					
1982	4379	21.2	3.4	4.8	29.4	---
1983 Operations						
MAY 1982 (proj.costs)		24.9	3.9	4.9	33.6	
(anticipated)		(21.8)	(3.1)	(4.9)	(29.8)	3.8
OCT 1982 (proj.costs)		23.8	4.1	6.4	34.3	
(anticipated)		(21.8)	(3.1)	(6.4)	(31.3)	3.0
FINAL	4747	23.4	3.9	5.3	32.6	---
1984 Operations						
MAY 1983 (proj.costs)		28.7	4.4	6.4	39.5	
(anticipated)		(25.4)	(4.1)	(6.4)	(35.9)	3.6
OCT 1983 (proj.costs)	5892	27.4	5.0	8.3	40.7	
(anticipated)		(25.0)	(4.5)	(8.0)	(37.5)	(3.2)
FINAL	?	?	?	?	?	?

The West Coast Ship Scheduling Group elected Brian Lewis, University of Washington as its Chairman for 1984.

After conference with the Group, Dr. Lewis set the next meeting of the West Coast Ship Scheduling Group for Seattle, during the last week in February.

The East Coast Ship Scheduling Group will hold their next meeting in Washington, D.C., during the first week in March.

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

Attachment 1

Attendees

Richard Alderman, NOAA
Thomas C. Aldrich, U.S. Geological Survey
William Barbee, UNOLS Office
John Bash, University of Rhode Island
J. Frisbee Campbell, University of Hawaii
Larry Clark, NSF/OFS
Tom Cooley, NSF/OFS
Bruce K. Cornwall, Johns Hopkins University/Chesapeake Bay Institute
Joe Curray, Scripps Institution of Oceanography, Advisory Council
Emma R. Dieter, University of Alaska
R. P. Dinsmore, Woods Hole Oceanographic Institution, Chairman (East Coast)
John Donnelly, Woods Hole Oceanographic Institution
Robert Douglas, University of Southern California
Jim Gibbons, University of Miami
Donn Gorsline, University of Southern California, Advisory Council
James Griffin, University of Rhode Island
Grant Gross, NSF/OCE
Peter Hackor, NSF/Physical Oceanography
Don Heinricks, NSF/Geology; Geophysics
Mark Holmes, USGS, Menlo Park
Tom Johnson, Duke/University of North Carolina
Keith Kaulum, ONR
Don Keach, University of Southern California
Henry Kennedy, Lamont-Doherty Geological Observatory
Ronald La Count, NSF/OFS
Brian Lewis, University of Washington
Bruce Malfait, NSF/OSRS
John Martin, Moss Landing Marine Laboratories, Chairman (West Coast)
John McMillan, NSF/OFS
David Menzel, Skidaway
Charles Miller, Oregon State University
Bill Mitchell, University of Texas at Austin
John Morrison, NSF/OSRS

Wadsworth Owen, University of Delaware
Bruce Robison, University of California - Santa Barbara, Advisory Council
Alexander Shor, Lamont-Doherty Geological Observatory
George Shor, Scripps Institution of Oceanography
Mitchell Stebens, UNOLS Office
Harris B. Stewart, Old Dominion University
Duane Tollekson, ONR
T. K. Treadwell, Texas A & M University
Joe Ustach, Duke/University of North Carolina
Boyce Watkins, University of Washington
Richard West, NSF/OFS

EAST COAST SHIP FUNDING PROJECTIONS

1984 PROJECTIONS

SHIP	OP DAYS	NSF $M	ONR $M	$M	OTHER $M	$M	TOTAL $M
ATLANTIS II	313	2.20	0.43	NOAA 0.42	USGS 0.23		3.28
KNORR	298	2.00	1.00	DOE 0.22	USGS 0.14		3.36
CONRAD	325	2.84	0.29	JOI 0.06	OTHER 0.08		3.27
ENDEAVOR	256	1.08	0.13	DOE 0.31	OTHER 0.37		1.90
OCEANUS	265	1.10	0.25	MMS 0.15	DOE 0.20	USGS 0.05	1.75
ISELIN	270	1.50	0.15	MMS 0.15			1.80
GYRE	290	0.80	0.40	MMS 0.45	USGS 0.17	TAMU 0.15	1.97
CAPE HATTERAS	246	1.00	0	DOE 0.03	UNC 0.05	MMS 0.22	1.30
CAPE FLORIDA	225	1.00	0	OTHER 0.10	U.M. 0.10		1.20
CAPE HENLOPEN	174	0.30	0.02	NOAA 0.14	OTHER 0.19	U.DEL 0.10	0.74
RIDGELY WARFIELD	155	0.55	0				0.55
FRED MOORE	121	0	0	USGS 0.03	JOI 0.62	UT 0.08 OTH0.24	0.97
BLUE FIN	220	0.13	0	DOE 0.04			0.18
CALANUS	141	0.21	0	NOAA 0.03			0.24
TOTAL	3,299	14.71	2.67		5.13		22.51

M.M.S.	0.97	STATE/UNIV	0.48
U.S.G.S.	0.62	J.O.I.	0.68
D.O.E.	0.81	OTHER	0.97
NOAA	0.60		
			5.13

Attachment 3
Oct. 25, 1983

WEST COAST SHIP FUNDING PROJECTIONS

1984 PROJECTIONS

SHIP	OP DAYS	NSF $K	ONR $K	$K	OTHER $K	$K	TOTAL $K
MELVILLE	258	2,890*		SANDIA 271	UC 12		3,173
WASHINGTON	268	1,945	1,059		UC 81		3,084
NEW HORIZON	260	211	359		UC 1,049	DARPA 211	1,831
E.B. SCRIPPS	146	318	102	DOE 6			426
VELERO IV	209	749		NASA 84			833
CAYUSE	135	357		S.F. MLML	125		482
WECOMA	242	1,832			SANDIA 39		1,870
THOMPSON	267	1,840	595				2,435
BARNES	220	142				DOE-20 METRO	162
ALPHA HELIX	239	1,755	79			63	1,898
KANA KEOKI	239	446	223	DMA-500 DOE 54	unident. 76		1,300
MOANA WAVE	110	167		DMA, JOI 512			679
TOTAL	2,593	12,652*	2,417	1,427	1,382	294	18,173

3,103

*Includes DPP-1,033

OTHER

Unidentified	76	JOI	386
SANDIA	310	DMA	626
U. CALIF	1,142	ALASKA	63
DARPA	211	MLML	71
DOE	70	S.F.	54
NASA	84	METRO	10