

SUMMARY REPORT OF THE MAY 1981  
SEMIANNUAL MEETING

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JUNE 1981



# UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

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

UNOLS Office  
Woods Hole Oceanographic Institution  
Woods Hole, Massachusetts 02543

## SUMMARY REPORT OF SEMIANNUAL MEETING

May 28-29, 1981

COSMOS CLUB AUDITORIUM, WASHINGTON, D.C.

First Day, May 28, 1981

1. GENERAL: The sequence below follows the order in which agenda items were considered. The figures following each item represent the date/item number as originally listed on the agenda (Appendix I). Chairman for the two-day meeting was Capt. T. K. Treadwell, UNOLS Chairman, who welcomed those present. A list of Registered Attendees appears as Appendix II.

2. GUEST SPEAKER: Dr. John V. Byrne of Oregon State University and NOAA Administrator candidate was introduced and spoke on the subject "Marine Sciences in the '80's". He touched on various trends as he saw them such as increased nationalization of the oceans, a decrease in support of R & D activities expressed as a percentage of the GNP, a leveling off in the production of graduate engineers, a decrease in the filing of patent applications, to mention a few.

He suggested organized and cooperative efforts in oceanography had the best chance of success.

3. OCEAN SCIENCES BOARD FLEET STUDY: During the past several months the UNOLS Office has supplied ship utilization data and past reports to OSB members conducting this study.

Dr. M. Mullin, UCSD, presented a progress report and indicated the study reviews the present status and nature of the fleet, estimates of operational funds, maintenance burden, evolutions of NSF and ONR funding projections, etc. The report is expected to be available this fall.

4. ADVISORY COUNCIL: G. Anderson, Chairman, gave a brief report on activities including the establishment of the East and West Coast Regional Scheduling Groups. These groups had met last fall and just the day before. There is increased circulation of ship time requests assuring funded programs coupled with the optimum vessels.

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5. ALVIN REVIEW COMMITTEE (ARC): Dr. R. Corell, Chairman, reviewed the 1981 and tentative 1982 schedules and tracks. He mentioned his committee had reviewed some outstanding proposals for work in distant regions.

This prompted ARC to put out a one page flyer to the community to assess interest in using ALVIN in the Western Pacific Ocean, with a 1983/4 time frame. The flyer indicated a September 15 deadline and is included here as Appendix III.

The Submersible Science Study report, under the direction of Dr. W. Ryan, L-DGO, is undergoing further revisions as a result of reviews of the earlier version circulated last March. Its later draft is expected this fall.

Because of proposal pressure, obvious deficiencies of LULU and ARC's concern with obtaining a world-wide operational capability for ALVIN the committee wished to make the following recommendations:

1. That UNOLS commission an engineering study of existing UNOLS vessels that might serve as a support vessel to ALVIN
2. That a letter of intent be sent NSF, as coordinating Federal agency, preparing the way for a proposal to be formulated by W.H.O.I. to upgrade the ALVIN/LULU system

These were distributed and read by T. Treadwell. For complete text see Appendix IV. E. Allmendinger, G. Keller, Wm. Ryan were present to answer questions. There was concern fruition of the plan would remove a general purpose R/V from the fleet; it was pointed out a vessel is detailed as an escort much of the time anyway.

Only the first recommendation dealing with an engineering study of AGOR-class vessels was approved the next day. (28/5)

6. TECHNOLOGY ASSESSMENT COMMITTEE (TAC): C. Tollios, Chairman, reviewed TAC's history noting it was authorized by this meeting in May of 1979. Its first meeting was in October of that year and since then they had been gathering data relating to winches, wire, marine cranes, navigation and communications.

There was concern TAC might generate "standards" in these areas of concern that operators might not approve of. Some felt RVOC should take on the truly operational needs and that TAC's efforts be directed to scientific needs.

Status of TAC's winch/wire and crane reports was that they could be expected this fall. (28/6)

7. POST CRUISE OBLIGATIONS: Both W. Erb and L. Stevens spoke on this topic. The former informed the group of further complexities with Mexican research permits and that about 30% of our foreign clearance requests were for work in their waters. The latter reminded those present to hold two

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bunks on UNOLS vessels for foreign participants and to include a full description of the research on the application.

The booklet "National Claims to Maritime Jurisdictions", no. 36, 4th Revision, May 1981, published by the Dept. of State was available at the meeting. Also a document listing included here as Appendix V (28/7) claimed maritime jurisdictions, issued as a Notice to Research Vessel Operators was available.

8. OUTLOOK FOR SHIP SUPPORT: Several agency representatives spoke to this topic and some had viewgraphs which were not available to the secretary.

USGS: R. Rowland mentioned the Department of Interior was being reorganized and it was difficult to ascertain bearing on UNOLS interests. He was concerned there was likely to be less money available, but more work to do.

ONR: K. Kaulum presented the following figures:

		\$M	
	FY80	FY81	FY82 (est.)
Total Research Funds	28.80	29.50	31.40
Total R/V Funds	3.27	3.14	3.66
Total UNOLS R/V Funds	-	2.78	3.48
ALVIN Support	0.43	0.35	0.35
Facilities (Ships)	0.15	2.45	3.00

He mentioned ONR Code 480 was going to become 420 and introduced P. Kirby (Adm. officer) and D. Tollaksen (R/V upgrading) of his ship management section.

NSF: J. McMillan mentioned an engineering directorate had been established at NSF and showed several viewgraphs relating to budgets, most of which are reproduced as Appendix VI. (28/8)

9. ASSESSING R/V RESEARCH CAPABILITY: T. Stetson indicated the earlier Material Condition Reviews had been replaced by Marad and INSURV teams, but assessment of oceanographic capability was still unresolved. Research Cruise Assessment forms had been developed and are being sent chief scientists to complete after their cruise. A good return had been realized and the UNOLS Office has been forwarding copies to the operators. These, compiled with post-cruise critiques at institutions, should alert operators to any deficiencies. (28/9)

SUMMARY REPORT OF SEMIANNUAL MEETING, May 28-29, 1981

10. TELEMAIL NETWORK: D. Spencer introduced R. Heinmiller who had extensive experience with Telemail as a PEQUOD coordinator. Previously, the UNOLS Office had registered institutional and committee members' names on Telemail and mailed an informative packet to members. R. Heinmiller elaborated on the system and demonstrated a portable terminal.

The Advisory Council had agreed to try the system for a year at their February meeting. (28/11)

11. CRUISE OPTIMINATION: W. Gaither introduced W. Owen who told the group about their progress in minimizing cruise costs by means of a computer program. Speed between stations, distance, salaries and overhead are some of the parameters that can be entered. (28/12)

12. SCHEDULING LARGE UNOLS VESSELS: Dr. Audi Ben-Israel, mathematician from U. of Del., was introduced by W. Gaither. He spoke on a procedure employing algorithms used by truck fleet operators to select routes and vehicles for cargoes to be moved from point to point. He indicated these techniques were well known to the trucking industry but that funds would be needed to implement a similar system for UNOLS. No action was taken at this time. (28/10)

13. EAST-WEST SCHEDULING GROUPS: These bodies had met the day before and examined 1982 projected schedules. Speaking for both groups, R. Dinsmore presented the following table:

1982 Preliminary Funding Profile \$M

	<u>NSF</u>	<u>ONR</u>	<u>OTHER</u>	<u>TOTAL</u>
West Coast, 12 R/Vs	10,960	1,490	2,080	14,540
East Coast, 13 R/Vs	<u>12,231</u>	<u>1,568</u>	<u>4,176</u>	<u>17,975</u>
Totals	23,191	3,058	6,256	32,515

It was pointed out the "other" category had the greatest potential for shortfall. MELVILLE appeared underutilized and the nature of CONRAD's refit was not clear. (28/14)

Second Day, May 29, 1981

GENERAL: The second day business meeting was called to order at 0835 by Capt. Treadwell, Chairman. T. Stetson conducted a roll call which showed all seventeen Members and seven Associate Members present.

1. UNOLS SITE & EXECUTIVE SECRETARY CANDIDATES: G. Anderson reviewed the UNOLS solicitation which had gone out to member institutions and indicated the Search Committee planned to produce a list of qualified applicants to be sent the would-be host institutions. (29/1)

2. UNOLS - MEMBER SUPPORTED?: W. Gaither elaborated on his proposal that UNOLS incorporate (See Appendix VII). There was much discussion pro and con. There seemed to be general feeling against changing the nature of UNOLS and incorporation would cost money in addition to the dues structure proposed.

G. Keller proposed members think about this subject and forward any comment to the Advisory Council. The latter will report to the membership this fall. (29/2)

3. CHARTER AMENDMENT: The Advisory Council had been concerned about meeting attendance and offered the following amendment which the secretary had circulated well prior to the meeting.

#### AMENDMENT TO CHARTER

*MOTION: If any member of the Advisory Council misses three consecutive meetings during the individual's three-year term, it will signify a loss of the person's membership on the Council. A replacement to complete the term shall be sought by the Council and recommended to the UNOLS membership at the next national meeting.*

It was passed by voice vote. (29/3)

4. R/V SAFETY STANDARDS: The secretary reviewed comments received on his update of the safety standards. First issued in May, 1976, many regulations had come into effect regarding R/V operation. The secretary had added chapters dealing with radioisotopes, SCUBA, and chartering vessels outside a member's regular fleet. A list of eight minor changes was circulated with draft copies of the standards.

Both were adapted and future issues will incorporate these minor changes. (29/4)

5. ELECTION OF CHAIRMAN & VICE-CHAIRMAN: G. Keller, J. Martin and T. Treadwell, members of this year's Nominating Committee, had developed a slate for all offices and the secretary had developed vitae on all candidates. The slate and vitae were circulated.

By written ballot, Derek W. Spencer and Dirk Frankenberg were elected Chairman and Vice-chairman of UNOLS respectively. (29/5)

## SUMMARY REPORT OF SEMIANNUAL MEETING

6. ELECTION TO ADVISORY COUNCIL: Because D. Spencer was elected as above, an additional vacancy opened. Three candidates from member institutions were therefore elected: Drs. Joseph R. Curray (UCSD), Donn S. Gorsline (USC), and John C. Van Leer (U. of Miami). Dr. Robert W. Corell (UNH) was elected from an Associate Member Institution. (29/6)

7. APPOINTMENTS TO ALVIN REVIEW COMMITTEE (ARC): Drs. J. Edmond, K. Macdonald and D. Rhoads are members with expiring terms. ARC recommended replacements based on the content of proposals now coming before the Committee rather than on strict disciplinary lines.

The following were approved at this time and all have agreed to serve:

Dr. Robert C. Aller, Geology and Geophysics  
Assoc. Prof., Department of the Geophysical Sciences,  
U. of Chicago

Geochemistry of marine sediments and pore waters,  
biogeochemistry of animal-sediment interactions

Dr. Frederick L. Sayles, Geochemistry  
Assoc. Scientist, Chemistry Department, W.H.O.I.  
Interstitial water chemistry of deep sea sediments,  
diffusional flux of ions between sediments and  
the ocean

Dr. A. Aristides Yayanos, High Pressure Biophysics  
Assoc. Research Physiologist, Scripps  
High pressure molecular biophysics, deepsea and radiation  
biology

8. APPOINTMENT TO TECHNOLOGY ASSESSMENT COMMITTEE (TAC): A general discussion developed on the present composition and priorities of TAC. There was concern they could accomplish their goals and that TAC would mandate minimum standards against members' wishes.

T. Treadwell mentioned their activities were being overseen by the Advisory Council and a member attended each TAC Meeting.

It was decided to have TAC recommend replacements to the Council by mid June and that the Council would announce the candidate(s) to the membership by June 30th.

9. OTHER:

a. MOTOR BOAT LICENSE V. DOCUMENTATION: A discussion on relative merits of both means of operation developed. A documented vessel requires lifeboats or equivalent and would be subject to the Officers Competency Act, necessitating licensed personnel and other requirements.

B. Barber thought RVOC's fall meeting could update the situation.  
B. Veek, secretary, agreed RVOC should review the situation.

## SUMMARY REPORT OF SEMIANNUAL MEETING

b. UNOLS MEETINGS: A question as to efficacy of semiannual meetings was raised by T. Royer. With the existence of the East-West Regional Scheduling Groups and an expected increase in the use of Telemail many felt communications within UNOLS had improved. D. Spencer said the Council would consider returning to annual meetings.

c. ISOTOPES ON R/Vs: G. Anderson said his Council had considered the problems raised by relatively high levels of radioisotopes such as C<sup>14</sup>. Geochemists had proposed a total ban on their use on some vessels. Clearly, different groups can tolerate different levels of "contamination."

D. Spencer reviewed a February meeting chaired by N. Anderson (NSF/OCE) at Scripps.

It appeared G. Ostlund (RSMAS) and R. Weiss (Scripps) were working on a document dealing with isotope handling, but date of its release was unknown.

d. NOTE OF THANKS: A vote of appreciation and thanks was given T. Treadwell for his service to UNOLS as Chairman, J. Martin as vice-chairman and G. Anderson as Advisory Council Chairman.

Meeting Adjourned  
1215, May 29, 1981

Thomas Stetson  
Executive Secretary  
UNOLS



## UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

## SEMIANNUAL MEETING

## AGENDA

0900 THURSDAY MAY 28, 1981, COSMOS CLUB AUDITORIUM  
2121 MASSACHUSETTS AVENUE, WASHINGTON, D.C.

1. INTRODUCTION & WELCOME- CAPT. T. K. TREADWELL, CHAIRMAN, UNOLS
2. GUEST SPEAKER: DR. JOHN V. BYRNE, MARINE SCIENCES IN THE '80S
3. THE OCEAN SCIENCES BOARD FLEET STUDY- A PROGRESS REPORT, DR. MICHAEL M. MULLIN, UCSD
4. REPORT BY DR. GEORGE C. ANDERSON, CHAIRMAN OF UNOLS ADVISORY COUNCIL
5. ALVIN REVIEW COMMITTEE- REPORT BY DR. ROBERT W. CORELL, CHAIRMAN
6. TECHNOLOGY ASSESSMENT COMMITTEE- REPORT BY MR. CONSTANTINE D. TOLLIOS, CHAIRMAN  
*Discussion by the membership is invited*
7. INTERNATIONAL POST CRUISE OBLIGATIONS- A PAST YEAR OVERVIEW, MR. WILLIAM A. ERB, DEPT. OF STATE
8. OUTLOOK FOR FY1982/1983 SHIP SUPPORT- FORCASTS BY FEDERAL FUNDING AGENCIES
9. REVIEW MECHANISMS FOR ASSESSING SHIPS' RESEARCH CAPABILITY, NAVY & NSF REPRESENTATIVES
10. OPTIMUM SCHEDULING OF LARGE UNOLS VESSELS & OTHER CONCERNS  
*Dean William S. Gaither, U. of Delaware*

1200-1400

LUNCH BREAK

OPEN

11. PROPOSED TELEMAIL NETWORK- DR. DEREK W. SPENCER, W.H.O.I.
12. A CRUISE OPTIMIZATION PROGRAM- MR. WADSWORTH OWEN, U. OF DELAWARE
13. OTHER TOPICS  
*This is an opportunity for representatives of research institutions as well as individual scientists and Federal officials to raise and discuss matters of interest to the meeting*
14. EAST-WEST REGIONAL SCHEDULING SESSION
  - *The ship scheduling session is an informal meeting for UNOLS members to meet, compare and discuss problems associated with 1982 ship schedules*
  - *The session is open to all persons interested and especially to scientists who have ship time needs in 1982 or 1983 and wish to present their needs to operators*
  - *Preliminary ship schedules have been developed by UNOLS Members and collated sets will be available*

## UNOLS BUSINESS MEETING

0830 FRIDAY MAY 29, 1981, COSMOS CLUB AUDITORIUM

1. UNOLS OFFICE SITE & EXECUTIVE SECRETARY REPLACEMENT COMMITTEE
2. UNOLS - A MEMBER SUPPORTED ORGANIZATION?  
*Dean William S. Gaither, U. of Delaware*
3. AMENDMENT OF CHARTER  
*Concerning Attendance by Advisory Council Members*
4. ADOPT RE- ISSUE OF RESEARCH VESSEL SAFETY STANDARDS
5. ELECTION OF CHAIRMAN & VICE CHAIRMAN
6. ELECTION OF THREE MEMBERS TO THE ADVISORY COUNCIL
7. APPOINTMENT OF THREE MEMBERS TO THE ALVIN REVIEW COMMITTEE
8. APPOINTMENT OF ONE MEMBER TO THE TECHNOLOGY ASSESSMENT COMMITTEE
9. OTHER BUSINESS THAT PROPERLY MAY COME BEFORE THE MEETING

## UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

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UNOLS Office  
Woods Hole Oceanographic Institution  
Woods Hole, Massachusetts 02543

SEMIANNUAL MEETING  
Washington, D.C. 28-29 May 1981

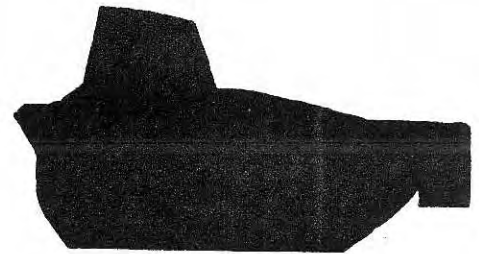
## REGISTERED ATTENDEES

F.R. Alexander, NSF/OCE	M.J. Perry, NSF/OCE
E.E. Allmendinger, UNH	H.B. Redman, NOAA
G.C. Anderson, U.WA	A.F. Richards, Lehigh U.
R.T. Barber, Duke	B.H. Robison, UCSB
J.F. Bash, URI	R.W. Rowland, USGS
A.B. Israel, U. Delaware	T.C. Royer, U.AK
J.V. Byrne, OSU	W.B.F. Ryan, L-DGO
H.L. Clark, NSF/OCE	W.M. Sackett, U. So.Fl.
R.W. Corell, UNH	R.W. Schneider, U. Delaware
E.M. Cudworth, Jr., Sea Services Tech, Corp.	R.K. Sheehan, CBI
E.R. Dieter, U.AK	G.G. Shor, Jr., SIO
R.P. Dinsmore, W.H.O.I.	F.T. Smith, NOAA
R.C. Dugdale, Bigelow Lab.	D.W. Spencer, W.H.O.I.
E.A. Dunnington, U.MD	T.R. Stetson, UNOLS
R.B. Elder, NSF/OCE	L.R. Stevens, State Dept.
W.A. Erb, State Dept.	D.M. Tollaksen, NORDA
T.F. Forhan, NSF/OCE	C.D. Tollios, W.H.O.I.
W.S. Gaither, U. Delaware	T.K. Treadwell, TAMU
J. Gibbons, U. Miami	E.B. Veek, USC
J.J. Griffin, URI	R.C. Vetter, NAS/OSB
R.H. Heinmeiller, M.I.T.	J.B. Watkins, Jr., U.WA
C.E. Helsley, H.I.G.	R.S. Winokur, ONR
W.W. Hey, JOI, Inc.	J.M. Zeigler, VIMS
J.T. Katz, U. Mich.	
K.W. Kaulum, ONR/NSTL	
G.H. Keller, OSU	
H.V. Kennedy, L-DGO	
J.L. Kermond, N.A.S.V.L.G.C.	
P.O. Kirby, ONR	
R.R. La Count, NSF/OCE	
L.J. Langfelder, N.C. State U.	
M.G. Langseth, L-DGO	
J.H. Martin, MLML	
S.M. McKeller, NOAA	
J.G. McMillan, NSF/OCE	
D.W. Menzel, Skidaway	
C.B. Miller, OSU	
D.A. Moller, W.H.O.I.	
M.M. Mullin, UCSD	
R.C. Munson, NOAA	
M.E. Odegard, ONR	
W. Owen, U. Delaware	
K.M. Palfrey, OSU	
P.L. Parker, U. TX	

**UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM****Deep Submergence  
Research Vehicle ALVIN**

The Deep Submergence Research Vehicle ALVIN, based at the Woods Hole Oceanographic Institution, is designated a National Oceanographic Facility. Diving time is available for qualified research projects selected on the basis of scientific merit and compatibility of the proposed research.

DSRV ALVIN is owned by the U.S. Navy under the purview of the Office of Naval Research and is operated by the Woods Hole Oceanographic Institution with support from NSF, NOAA and ONR.

**WESTERN PACIFIC OCEAN**

The ALVIN Review Committee desires to assess the interest within the scientific community for diving programs in the WESTERN PACIFIC OCEAN during 1983 and 1984. For such an undertaking to be possible programs must be developed for transit periods. Honolulu, Wake and Guam Islands are likely stops.

Concise advance proposals containing an outline of science to be accomplished, investigators involved, geographic location, preferred dates and amount of time should be submitted by 15 September 1981 to:

Chairman, ALVIN Review Committee  
UNOLS Office  
Woods Hole Oceanographic Institution  
Woods Hole, Massachusetts 02543  
Telephone: 617/548-1400, Ext. 2352



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## Recommendations To Upgrade ALVIN/LULU System

Recommendation: The UNOLS ALVIN Review Committee recommends that UNOLS commission an engineering study of existing UNOLS vessels to determine:

- 1) Feasibility of conversion including prioritized recommendation of best ships presently in fleet.
- 2) Structural work that would be required to convert candidate ships on priority list.
- 3) Estimated cost of conversion.
- 4) Estimated time required for ship modification.

Recommendation: The UNOLS ALVIN Review Committee recommends to UNOLS that at the same time as the commissioning of the engineering study that a letter of intent be sent to NSF and a proposal team be established at W.H.O.I. to formulate the proposal. This proposal should include the following plan:

- 1) Refit UNOLS ship to become dedicated ALVIN support vessel.
- 2) Construct single-point ALVIN pick-up and A-frame launch/retrieval system.
- 3) Appropriate outfitting of the support vessel so that it can serve as a "stand alone" dedicated submersible science system.



## DEPARTMENT OF STATE

Washington, D.C. 20520

BUREAU OF OCEANS AND INTERNATIONAL  
ENVIRONMENTAL AND SCIENTIFIC AFFAIRS

May 26, 1981

NOTICE TO RESEARCH VESSEL OPERATORS

SUBJECT: Claimed Maritime Jurisdictions (Revision 1)

The purpose of the following table is to provide research institutions and federal agencies with guidance on maritime claims of foreign nations. The listing does not necessarily reflect acceptance or recognition by the United States Government of the claims or of the countries. Researchers are advised to consult with this office when any research is planned off foreign coasts.

Users of this table should recognize the limit of the application of these data. More specific information, such as claimed baseline, negotiated or claimed boundaries with neighboring states, etc. should be obtained for precise interpretative analysis.

Extended territorial sea, fishing, or economic zones may be interpreted by the coastal state as including jurisdiction over marine scientific or fisheries research. However, unless a claim is explicitly stated in the national law of that state the claim will not appear in the table. Researchers should consult this office for guidance as necessary.

Questions or updates on these lists should be directed to:

Lee R. Stevens  
Office of Marine Science  
and Technology Affairs  
Department of State  
Washington, D.C. 20520  
Telephone (202) 632-0789

CLAIMED MARITIME JURISDICTIONS

Claims listed in this table are derived from national laws. Boundary situations with neighboring states may preclude the extension of certain claims to the limits specified in those laws. This table excludes citation of jurisdictional claims over the continental shelf as well as jurisdictional claims over aircraft overflights.

## Claimed Maritime Jurisdictions:

- TS - Territorial Sea
- FR - Fisheries Research
- F - Fishing
- MS - Marine Scientific Research
- EZ - Economic Zone

## Lead Time:

- LT - Clearance request should be submitted to the Department of State (or country involved when diplomatic channels are not being used) the stated number of months in advance of the starting date of the research.

## Official Channels:

- OC - Clearance request should generally be submitted through the Department of State.

## Party to 1958 Conventions:

- HS - Convention on the High Seas
  - CS - Convention on the Continental Shelf
  - TS/CZ - Convention on the Territorial Sea and Contiguous Zone
- Parentheses indicate that a reservation, declaration, or statement may affect the interpretation of the convention by individual states.

COUNTRY	TS	FR	F	MS	EZ	LT	OC	Party to 1958 Conventions		
								HS	CS	TS/CZ
Albania	15							(X)	X	
Algeria	12									
Angola	20	200	200							
Argentina*	200	200	200	200		7				
Australia	3		200					X	X	X
Bahamas, The	3	200	200			2				
Bahrain	3									
Bangladesh**	12		200		200					
Barbados	12	200	200	200	200					
Belgium	3		200					X		X
Belize (U.K.)	3	12	12							
Benin	200									
Brazil	200	200	200	200		7	X			

\* Navigation and overflight permitted beyond 12 nautical miles.

\*\* Bangladesh claims are delimited from a claimed 10-fathom baseline.

COUNTRY	TS	FR	F	MS	EZ	LT	OC	Party to 1958 Convention		
								HS	CS	TS/CZ
Bulgaria	12							(X)	X	(X)
Burma	12	200	200	200	200					
Cameroon	50		50							
Canada	12	200	200				X		(X)	
Cape Verde*	12	200	200	200	200					
Chile	3	200	200			7				
China	12									
Colombia	12	200	200	200	200	4			X	
Comoros	12		200		200					
Congo	200									
Cook Islands (NZ)	12	200	200		200					
Costa Rica	12		200		200			X	X	
Cuba	12	200	200	200	200					
Cyprus	12								X	
Denmark**	3		200					X	X	X
Djibouti	12	200	200	200	200					
Dominica	3		12							
Dominican Republic	6	200	200	200	200			X	X	X
Ecuador	200	200	200	200		***				
Egypt	12									
El Salvador	200									
Equatorial Guinea	12									
Ethiopia	12		12							

\* Archipelagic claim.

\*\* Danish claim includes Greenland and the Faroe Islands.

\*\*\* Lead-time for Ecuador is 3 months; Galapagos Islands require 5 months.

COUNTRY	TS	FR	F	MS	EZ	LT	OC	Party to 1958 Conventions		
								HS	CS	TS/CZ
Federal Republic of Germany	3		200					X		
Fiji*	12							X	X	X
Finland	4		12					X	X	X
France**	12	200	200	200	200				(X)	
Gabon	100		150							
Gambia, The	50									
German Democratic Republic	3		200					(X)	(X)	(X)
Ghana	200									
Greece	6						X		(X)	
Grenada	12	200	200	200	200					
Guatemala	12	200	200	200	200			X	X	
Guinea	12		200		200					
Guinea-Bissau	12		200		200					
Guyana	12	200	200	200	200					
Haiti	12	200	200	200	200			X	X	X
Honduras	12	200	200	200	200					
Iceland	12	200	200	200	200	7				
India	12	200	200	200	200	7	X			
Indonesia	12	200	200	200	200	6		(X)		
Iran***	12		200							
Iraq	12									
Ireland	3		200							
Israel	6							X	X	X

\* Archipelagic claim.

\*\* French claims apply to all overseas departments and territories.

\*\*\* Iranian fishing limit extends to the median line of the Sea of Oman.



COUNTRY	TS	FR	F	MS	EZ	LT	OC	Party to 1958 Convention		
								HS	CS	TS/CZ
Italy	12							X		(X)
Ivory Coast	12	200	200	200	200					
Jamaica	12							X	X	X
Japan*	12	200	200					(X)		(X)
Jordan	3		3							
Kampuchea	12		200		200			X	X	X
Kenya	12	200	200	200	200			X	X	X
Kiribati	3		200							
Korea (North)**	12		200		200					
Korea (South)***	12		200							
Kuwait	12									
Lebanon	none		6							
Liberia	200									
Libya	12									
Madagascar	50		150		150			(X)	X	(X)
Malaysia	12		200		200			X	X	X
Maldives	****	35- 310	35- 310	35- 310	35- 100					
Malta	12		25						X	X
Mauritania	70	200	200	200	200					
Mauritius	12	200	200	200	200			X	X	X
Mexico	12	200	200	200	200	4	X	(X)	X	(X)

\* Japan's territorial sea is 3 nm in five "international straits."

\*\* North Korea has also claimed a 50-mile "military boundary line" in which all foreign vessels and aircraft are banned without permission.

\*\*\* South Korea's territorial sea is 3 nm in the Korea Strait.

\*\*\*\* Maldives has a rectangular/polygonal claim defined by coordinates.

COUNTRY	TS	FR	F	MS	EZ	LT	OC	Party to 1958 Conventions		
								HS	CS	TS/CZ
Monaco	12									
Morocco	12	200	200	200	200		X			
Mozambique	12		200		200					
Namibia	*		200							
Nauru	12	200	200		200					
Netherlands	3		200					X	X	X
New Zealand	12	200	200	200	200				X	
Nicaragua	200									
Nigeria	30		200		200			X	X	X
Niue (N.Z.)	12	200	200	200	200					
Norway	4	200	200	200	200				X	
Oman	12		200		200	4				
Pakistan	12	200	200	200	200					
Panama	200									
Papua New Guinea	12		200		200					
Peru	200									
Philippines**	12	200	200	200	200					
Poland	12		200					(X)	X	
Portugal	12	200	200	200	200	7		X	X	X
Qatar	3									
Romania	12							(X)	X	(X)
Saint Lucia	3		12							
Saint Vincent and the Grenadines	3		12							

\* No known legislation but probably 12.

\*\* Archipelagic claim.

COUNTRY	TS	FR	F	MS	EZ	LT	OC	Party to 1958 Conventions		
								HS	CS	TS/CZ
Sao Tome & Principe*	12	200	200	200	200					
Saudi Arabia	12									
Senegal	150							X		
Seychelles	12	200	200	200	200					
Sierra Leone	200		200					X	X	X
Singapore	3		12							
Solomon Islands*	3	200	200							
Somalia	200									
South Africa	12		200					X	X	X
Soviet Union	12		200				X	(X)	X	(X)
Spain	12		200		200	7		(X)	(X)	(X)
Sri Lanka	12	200	200	200	200					
Sudan	12									
Suriname	12	200	200	200	200					
Sweden**	12		200						X	
Syria	12									
Tanzania	50									
Thailand	12							X	X	X
Togo	30		200		200					
Tonga***	30-150*							X	X	X
Trinidad & Tobago	12							X	X	X

\* Archipelagic claim.

\*\* Sweden's territorial sea is 9 nm at Kattegat and in the Baltic at Bornholm.

\*\*\* "Historic" Rectangular/Polygonal Claim - 12 nm for Minerva Reef.

COUNTRY	TS	FR	F	MS	EZ	LT	OC	Party to 1958 Conventions		
								HS	CS	TS/CZ
T.T.P.-I.	3		200							
Tunisia	12									
Turkey*	6		12							
Tuvalu	3	200	200							
United Arab Emirates	3**		200		200					
United Kingdom***	3		200					(X)	X	(X)
United States****	3	12	200					X	X	X
Uruguay*****	200									
Vanuatu	12		200		200					
Venezuela	12	200	200	200	200	5		X	(X)	(X)
Vietnam	12	200	200	200	200					
Western Samoa	12									
Yemen (Aden)	12	200	200	200	200					
Yemen (Sana)	12									
Yugoslavia	12							X	(X)	X
Zaire	12									

\* Turkey's territorial sea is 12 nautical miles in the Black Sea.

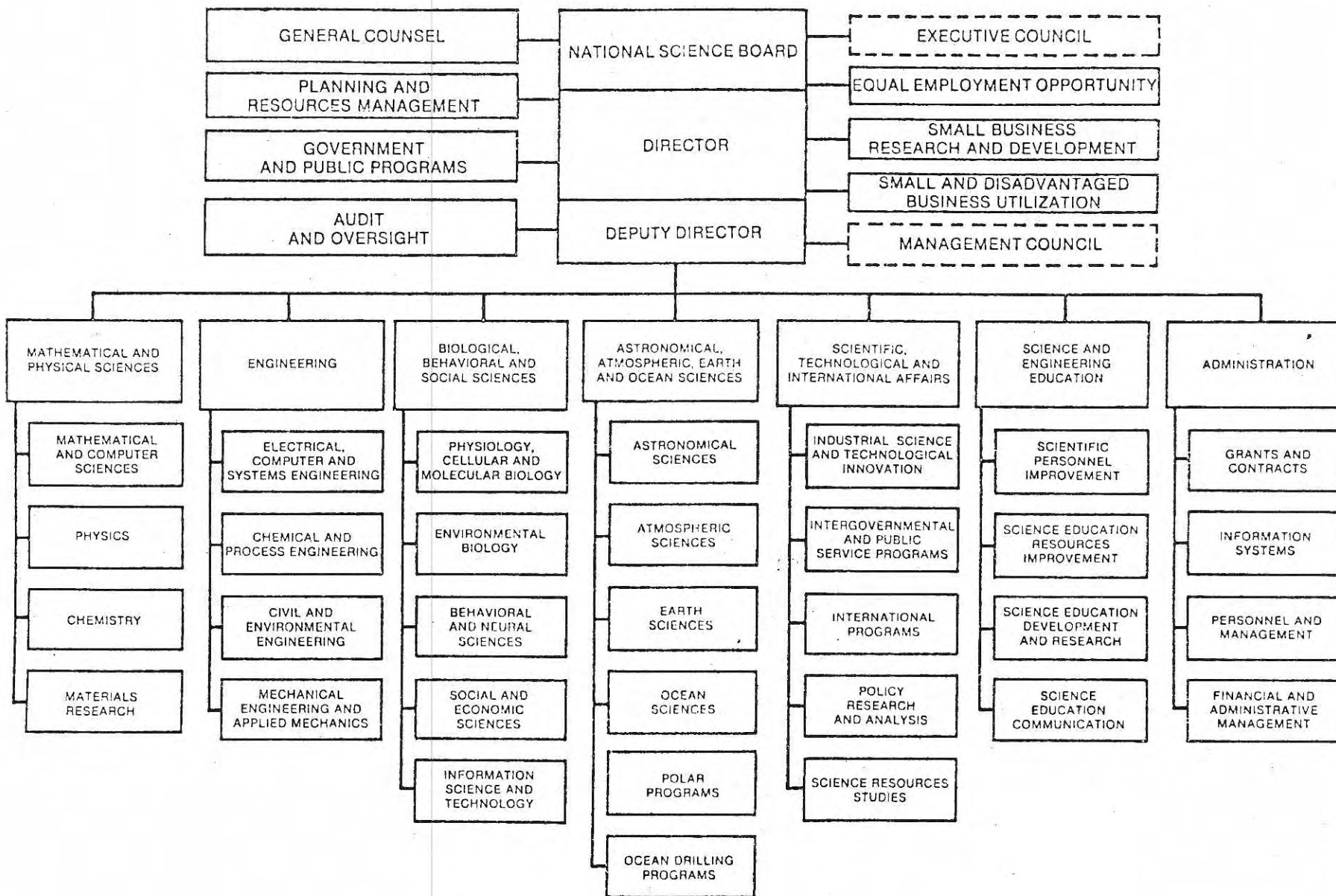
\*\* 12 nautical miles for Sharjah.

\*\*\* Includes Bermuda, British Virgin Islands, the Cayman Island, Pitcairn, and Turks and Caicos Islands.

\*\*\*\* Includes Puerto Rico, U.S. Virgin Islands, American Samoa, Guam, and other U.S. territories.

\*\*\*\*\* Navigation and overflight permitted beyond 12 nautical miles.

# NATIONAL SCIENCE FOUNDATION





# NATIONAL SCIENCE FOUNDATION

## REVISED FY 1981 PLAN AND REVISED FY 1982 BUDGET

(OBLIGATIONS IN MILLIONS OF DOLLARS)

	ACTUAL FY 1980	FISCAL YEAR 1981			FISCAL YEAR 1982		
		PREVIOUS PLAN FY 1981	FY 1981 RESCIS- SIONS	REVISED PLAN FY 1981	PREVIOUS PROPOSAL FY 1982	AMEND- MENTS	REVISED BUDGET PROPOSED FY 1982
<b>RESEARCH AND RELATED ACTIVITIES</b>							
<b>APPROPRIATION</b>							
MATHEMATICAL AND PHYSICAL SCIENCES	\$226.99	\$257.08	-\$8.86	\$248.22	\$301.30	-5.89	\$295.41
ENGINEERING	76.60	86.82	-3.00	83.82	104.61	-2.05	102.56
BIOLOGICAL, BEHAVIORAL, AND SOCIAL SCIENCES	185.66	198.10	-15.00	183.10	218.99	-47.01	171.98
ASTRONOMICAL, ATMOSPHERIC, EARTH AND OCEAN SCIENCES	218.06	236.15	-8.14	228.01	268.00	-14.85	253.15
OCEAN DRILLING PROGRAMS	19.47	22.00		22.00	30.00	-4.00	26.00
U.S. ANTARCTIC PROGRAM	55.84	64.70		64.70	70.10		70.10
SCIENTIFIC, TECHNOLOGICAL, AND INTERNATIONAL AFFAIRS	36.64	56.35	-20.40	35.95	80.00	-42.30	37.70
CROSS-DIRECTORATE PROGRAMS	15.58	26.75	-10.60	16.15	97.90	-97.90	.00
PROGRAM DEVELOPMENT AND MANAGEMENT	58.24	61.70	-1.00	60.70	67.20	-4.00	63.20
<b>SUBTOTAL, OBLIGATIONS</b>	<b>893.08</b>	<b>1,009.65</b>	<b>-67.00</b>	<b>942.65</b>	<b>1,238.10</b>	<b>-218.00</b>	<b>1,020.10</b>
<b>SCIENCE AND ENGINEERING EDUCATION</b>							
<b>ACTIVITIES APPROPRIATION</b>							
SCIENTIFIC PERSONNEL IMPROVEMENT	33.10	34.50	-1.00	33.50	42.80	-32.90	9.90
SCIENCE EDUCATION RESOURCES IMPROVEMENT	21.80	21.80	-5.10	16.70	46.90	-46.90	.00
SCIENCE EDUCATION DEVELOPMENT AND RESEARCH	13.77	15.10	-7.00	8.10	16.20	-16.20	.00
SCIENCE EDUCATION COMMUNICATION	8.52	9.30	-2.90	6.40	6.00	-6.00	.00
<b>SUBTOTAL, OBLIGATIONS</b>	<b>77.19</b>	<b>80.70</b>	<b>-16.00</b>	<b>64.70</b>	<b>111.90</b>	<b>-102.00</b>	<b>9.90</b>
<b>SPECIAL FOREIGN CURRENCY PROGRAM</b>							
<b>OBLIGATIONS</b>	<b>4.86</b>	<b>5.64</b>		<b>5.64</b>	<b>3.50</b>		<b>3.50</b>
<b>TOTAL, NSF OBLIGATIONS</b>	<b>\$975.13</b>	<b>1,095.99</b>	<b>-\$83.00</b>	<b>\$1,012.99</b>	<b>1,353.50</b>	<b>-320.00</b>	<b>1,033.50</b>

AAEO 81-2081  
3-81



**ASTRONOMICAL, ATMOSPHERIC, EARTH  
AND OCEAN SCIENCES**  
(DOLLARS IN MILLIONS)

	<u>ACTUAL FY 1980</u>	<u>REVISED FY 1981</u>	<u>CHANGE FY 81/80</u>	<u>REVISED FY 1982</u>	<u>CHANGE FY 81/82</u>
ASTRONOMICAL SCIENCES	\$56.7	\$56.5	-0.2	\$63.8	+7.3
ATMOSPHERIC SCIENCES	63.3	66.5	+3.2	73.2	+6.7
EARTH SCIENCES	26.0	26.9	+0.9	30.1	+3.2
OCEAN SCIENCES	66.3	72.4	+6.1	79.7	+7.3
ARCTIC RESEARCH PROGRAM	5.8	5.7	-0.1	6.3	+0.6
TOTAL	<u>\$218.1</u>	<u>\$228.0</u>	<u>9.9</u>	<u>\$253.1</u>	<u>25.1</u>

## UNOLS FLEET FUNDING (\$ MILLIONS)

	1979 (ACT)	1980 (ACT)	1981 (EST)	1982 (EST)
SHIPS	28	26	25*	25
NSF	16.5	18.1	21.0	23.3
ONR	2.6	2.9	3.4	3.5
OTHER	2.8	3.8	5.0	5.0
TOTAL	<u>21.9</u>	<u>24.8</u>	<u>29.4</u>	<u>31.7</u>
REQUIRED- FULL OPERATION	24.8	28.2	31.2	36.7
SHORTFALL	2.9	3.4	1.8	5.0
LARGE (> 150ft) SHIP DAYS NOT FUNDED	545	560	363	580

\*TWO SHIP RETIRED JAN 81, TWO NEW CZRV'S WILL NOT COME ON LINE UNTIL LATE 81.  
CONRAD IN LAY-UP



## D R A F T IV

A Proposal to Restructure the University  
National Oceanographic Laboratory System  
To Improve Operational and Planning Capabilities  
by  
University of Delaware  
May 27, 1981

Background

The University National Oceanographic Laboratory System was established in 1969 to coordinate the research ship operations of the academic fleet. This was done in response to widespread concern that there was waste and unnecessary cost associated with the operation of University operated research vessels owned and/or supported by the federal government through inadequate coordination. This organization has been in existence for over ten years and can cite a record of modest success in meeting its goals.

Probably the most serious deficiencies in UNOLS operation are 1) the lack of initiative in establishing economically based assessment of current and future research platform needs, 2) inadequate member commitment and enthusiasm to identify, anticipate, and then undertake needed tasks, 3) the apparent control of UNOLS by government sponsors and 4) the resulting loss in the stature of UNOLS as an effective research platform coordinating mechanisms both within the federal government and among the larger member institutions.

A logical Time to Re-examine UNOLS

Several events have occurred simultaneously to make the May 1981 annual meeting the logical occasion to re-examine the goals, structure,

and operation of UNOLS. These events include 1) a new Administration which is planning an increased emphasis on military preparedness, budget austerity in the civil sector, assessment of user charges, and economic productivity for the nation, 2) staff changes at the NSF, 3) the resignation of the UNOLS Executive Secretary and 4) the call for proposals to relocate the UNOLS Office and refill the position of Executive Secretary. Further, an Academy study by the Ocean Sciences Board of research vessel management and operations requested by the NSF and the Navy is now in mid-stream.

#### What Should New UNOLS Goals Be?

The original objectives of the UNOLS organization were sound and should be continued. Emphasis should be increased on developing strategy and carrying out long-range planning with the program interests of member institutions which are appropriate for UNOLS study and recommendation. The NOSS program was a case in point. Another is vessel use optimization as well as cruise optimization to reduce cost. UNOLS should be structured so that it can initiate, and as necessary, conduct the studies deemed appropriate to the broad mission of the organization.

#### How to Reorganize

To accomplish the goals described above in the most expeditious manner and to increase member organization interest and commitment I recommend two actions:

1. Incorporate UNOLS as a tax exempt non-profit organization.

2. Derive approximately 50% of core operating costs (exclusive of grant and contract revenues) from member and associate member organizations. The balance would come from interested and affected governmental agencies and industry.

### Budget and Sources of Core Support

The budget to support UNOLS core activities pays the Executive Secretary, an Executive Assistant, a secretary, computer, communication, and travel costs for member committees. Allow for some inflation in next year's budget so target is \$240,000. Two funding models are presented for discussion purpose:

	<u>Model 1</u>	<u>Model 2</u>
Full Members (17)	\$ 4,000/ea. = \$ 68,000	\$ 7,000/ea. = \$119,000
Associate Members (31)	500/ea. = 10,500	500/ea. = 10,500
Federal Agencies (8)	15,000/ea. = 120,000	13,813/ea. = 110,500
Industrial Organizations	<u>41,500</u>	<u>--</u>
	\$240,000	\$240,000

There might be some reduction in the number of associate members if such an annual fee were established. The main purpose of this fee distribution would be to enhance participation, provide for independent action, and involve all potentially interested organizations.

Contract and grant income would be over and above this core budget.

### Schedule for Implementation

The May 1981 annual meeting appears to be a logical time to consider this issue and to take action. I say this because the decision will, in part, influence the type of individual who will be attracted to the position of Executive Secretary. This in turn will influence how institutions proposing to host the UNOLS Office will structure their proposals.

### Recommendation

I recommend that this proposal be discussed at the May 1981 annual meeting and that an ad hoc committee of interested member organization heads be formed to solicit reactions and make a recommendation to the UNOLS membership. To take the action proposed would require top level commitment from our respective institutions. The time at which this ad hoc committee reports should be soon enough to permit any proposed reorganization of UNOLS to take place before the six institutions that have indicated their interest in hosting the UNOLS Office submit their final proposals on October 31, 1981.

WSG/o 5/27/81



