UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

SUMMARY REPORT

of

UNOLS NATIONAL EXPEDITIONARY PLANNING COMMITTEE WORKSHOPS

and

ALVIN REVIEW COMMITTEE WORKSHOPS

December 4, 1983 - San Francisco, California

January 22, 1984 - New Orleans

CONTENTS

February 1984

UNOLS National Expeditionary Planning Committee
ALVIN Review Committee

Summary of Workshops

December 4, 1983 - San Francisco, CA
and
January 22, 1984 - New Orleans, LA

Forward: On November 2, 1983, the Chairmen of the UNOLS National Expeditionary Planning Committee and the ALVIN Review Committee distributed a letter advising the oceanographic community of workshops to be held during the winter of 1983-1984 (Appendix I). The purpose of the workshops was to develop information and provide a planning base for the use of UNOLS ships on projects requiring extended expeditions, to remote areas, multi-ship operations or significant shiptime over several years and for the use of ALVIN and ATLANTIS II. The workshops considered intent to use ships and ALVIN in 1985, 1986 and 1987.

The workshop announcement solicited expressions of interest or intent to use UNOLS ships in an expeditionary mode or to use ALVIN during 1985-1987. Summaries of these Notifications of Intent are appended (UNOLS Expeditionary Planning, Appendix II, ALVIN/ATLANTIS II, Appendix III). Presentations by investigators who had submitted notifications formed the core of the workshops. By January 22, 1984, at the New Orleans workshop, 33 notifications had been received for expeditionary planning and 40 had been received for ALVIN/ATLANTIS II.

In addition to presentations by prospective principal investigators, George Shor, Chairman UNEPC, invited selected Federal agency officials to discuss programs that might use significant amounts of UNOLS expeditionary mode ship time in 1985-1987. Special attention was suggested for work in Southern Oceans. Summaries were made by representatives from JOI (for ocean drilling site surveys), from ONR (emphasizing Special Focus programs) from USGS (of schedules of USGS ships) from NSF's Division of Polar Programs (estimating their Southern Ocean ship requirements) and from NSF's Division of Ocean Sciences (alerting UNOLS to potential long-term physical and climate programs).

Several members of each of the host committees attended the workshops:

At San Francisco

UNEPC	ARC
George Shor, Jr., Chairman, Scripps	Robert Corell, Chairman
Robert Corell, Advisory Council and ARC	Peter Jumars
Don Hussong, University of Hawaii	Fred Sayles
Alexander Shor, L-DGO	Jeff Weissel
Brian Lewis, Univ. of Washington	Mark Wimbush
John Donnelly, WHOI	Barrie Walden, WHOI, ALVIN operations

William Barbee, UNOLS

At New Orleans

UNEPC	ARC
George Shor, Jr., Chairman	Robert Corell, Chairman
Robert Corell, Advisory Council, ARC	Robert Aller
Frisbee Campbell, Univ. of Hawaii	Peter Jumars
Don Hussong, Univ. of Hawaii	Mark Wimbush
James Griffin, Univ. of Rhode Island	
Jack Bash, Univ. of Rhode Island	
John Donnelly, WHOI	

William Barbee, UNOLS
Mitchell Stebens, UNOLS

In addition, 30 to 50 agency officials and principal investigators attended portions of one or both meetings.

ALVIN/ATLANTIS II Planning

Robert Corell, ARC Chairman, characterized the 1984 schedule for ALVIN/ATLANTIS II at each meeting. He noted that system modifications had prevented operations for most of 1983, but that 1984 operations were expected to begin in January. As had previously been announced, the ARC has recommended that 1985 operations be in the Pacific.

Most of the notices of intent to use ALVIN/ATLANTIS II were presented at one of the two workshops. (Refer to summary in Appendix III.)

Summary Number	Principal Investigator	Presentation By
1.	Carney, R.S.	Carney, R.S.
2.	Craig, H./Wellan, D.	Anderson, R.N.
3.	Leinen, M.	Leinen, M.
4.	Keating, B.	Keating, B.
6.	Karl, D.	Epp, D.
7.	MacDonald, K.	Fox, P.
8.	Curl, H.	Massoth, G.
9.	Jumars, P.	Jumars, P.
10.	Clague, D.	Clague, D.
11.	Koski, R.	Koski, R.
12.	Fox, P.	Fox, P.
13.	Bryan, W./Thompson, G.	Ballard, R.
18.	Hey, R.	Hey, R.
19.	Hey, R.	Hey, R.
20.	Hessler, R.	Hessler, R.
21.	Ballard, R.	Ballard, R.
22.	Edmond, J.	Edmond, J.
23.	Hussong, D.	Hussong, D.
24.	Shor, A.	Shor, A.
26.	Rona, P.	Rona, P.
30.	Hessler, R.	Ingram, C.
31.	Rona, P.	Rona, P.
32.	Thistle, D.	Eckman, D.
33.	Grassle, F.	Grassle, F.
34.	Grassle, F.	Grassle, F.
35.	Hussong, D./Fryer, P.	Hussong, D.
37.	Malahoff, A.	Malahoff, A.
38.	Lutz, R.	Lutz, R.
39.	Childress, J. J.	Childress, J. J.

Presentations and notices of intent indicated that extensive programs will be proposed (or have been) for work in the Marianas region and on the Gorda-Juan de Fuca spreading system. Chairman Corell urged that the principals interested in each of these programs of investigation meet, establish means of coordination, and, insofar as possible, submit overviews describing overall objectives and coordinated ALVIN dive requests. Both groups were responsive to that suggestion. (At New Orleans, Don Hussong reported that a meeting of investigators proposing Marianas work had been held at Scripps. That meeting had resulted in an inventory of expected total dive requests for the Marianas in 1985.)

Expeditionary Planning. Only one of the 33 notices of intent received by January 22 (Appendix II) was presented at the workshops (Notice 1, Jannasch, H., Principal Investigator, discussed by M. Scranton).

Federal Program Projections

USGS: Mark Holmes presented tentative ship schedules for 1984 and 1985 (Appendix IV). The schedules include requirements not yet satisfied (vessel unknown).

JOI (Ocean Drilling Program Requirements): Jamie Austin provided a Request for Ocean Drilling Proposals/Participation (Appendix V). In addition, he outlined present plans for Site Surveys:

A. Funded. Peru-Chile Trench (Hawaii Institute of Geophysics - KANA KEOKI); work in 1984.

B. Decision, early 1984. Bahamas (Discussions with W.H.O.I./ L-DGO - U.T.).

C. RFP's expected. Kane Fracture Zone and Chile Triple Junction (Probable 1985 acquisition).

D. Synthesis. Labrador Sea (Canadian work), Norwegian Sea, Mediterranean Sea, Costa Rica/Venezuela and Columbia Basins (consideration by appropriate Working Groups).

Further work that has been tentatively proposed:

(International ship movements will be summarized in the next issue of the JOIDES Journal)

1. Canadian work in the Labrador Sea (Summer, 1984)

2. Weddell Sea -- Interest by Germans, French and English (this Austral Summer and next)

3. European interest in various parts of Indian Ocean in 1985-1986.

ONR: Keith Kaulum reported that much of ONR expeditionary-mode ship use will be in the Navy's Special Focus programs:

South Atlantic (Southern Oceans):

SEABEAM ship in late 1984 for geology-geophysics and physical oceanography.

Expect requirements for 1 ship for the project period (up to 6 months/year) in 1985, 1986 and 1987 each, perhaps more in 1986.

Physical oceanography: 60 days, 1985, 90 days 1986 and 120 days, 1987.

Geology and geophysics: 3-4 months each year.

Air-sea Interaction - Physical oceanography only. Expect to use very large ships - 1 month/year, 1985 and 1987 south of Bermuda, 1986 in the Pacific.

Bioluminescense: Largest ship available, to accommodate scientific party of up to 40:

1985, 30-45 days north of Hawaii

1986, no ship use

1987, 30 days north of Hawaii
30 days west coast

Margin of Ice Zone: Requirements not yet projected.

At the January 22 meeting in New Orleans, Gerald Morris, head of ONR's Marine Geology and Geophysics Program expanded on expected ship requirements in geology and geophysics.

Marine geology and geophysics expects ship time requirements of 8-9 months/year from the combination of core and special focus programs (40% from special focus).

Core programs in geology and geophysics will typically require two to three months' shiptime per year, for sediment dynamics (e.g., HEBBLE) and for deploying and recovering instrument arrays. These are often relatively short cruises. Much of G & G's additional use will require SEABEAM or SEAMARC II.

Special Focus programs have included an acquisition effort to put multibeam, SEABEAM and SEAMARC systems on ships and to fund these facilities through operational demonstration. The program was recently re-established for the last two of five years.

The Southern Oceans special focus was initiated last October as a 5-year program. First field exercises will be in late 1984 or early 1985. Ship requirements are projected at an average of five months per year (two G & G, three physical), beginning in 1984-1985, rising modestly in 1986-1987 and

falling in 1987-1988. Physical oceanography requirements are for CTDs, and buoy and current meter deployment. Foreign ships could be employed.

A special focus in Shallow Water Acoustics, mostly off the continental U.S. has recently been approved. Interest is focused on shallow water acoustics and acoustic properties of the seabed, from low frequencies to 10 KHz. Geology and geophysics is about 25-30% of the total program. Most requirements are for acoustics-system ships.

Other programs include Bioluminescense and Arctic Acoustics.

USGS: William Normark noted that USGS programs are often set so late that UNOLS shiptime has already been scheduled.

In discussions relative to West Coast use, GS expects 90-120 use days/year. East Coast use of UNOLS ships--mainly the GYRE--has averaged 5-8 months.

DPP: In a letter to George Shor (Appendix VI), Edward P. Todd, Director, Division of Polar Programs, NSF, expressed a policy that would continue DPP use of about 120 days' shiptime in the Southern Ocean in alternate austral summers (next 1985/86). The next program may focus on biological, geological/geophysical and, to some extent, physical oceanography primarily in the Atlantic.

Robert Wall, Head, Ocean Sciences Research Section, NSF, alerted UNEPC to two major programs that might use UNOLS ships in an expeditionary mode: TOGA and WOCE.

TOGA will examine the role of tropical oceans in climate variability. A program office has been established under Michael Hall, NOAA.

The World Ocean Circulation Experiment (WOCE) would examine world ocean circulation and its variability on the basis of a global synoptic data set from satellites. The data would be ocean surface topography and wind stress, requiring satellite scatterometers and altimeters scheduled to fly in 1986 and beyond. Ship time would be needed for ground truth.

R. Wall suggested that UNEPC should establish focal-point contacts with JOI, TOGA, WOCE and existing large programs.

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

November 2, 1983

Dear Colleague:

This letter, together with the attached announcements and forms to note interest, is to advise you of UNOLS workshops to generate planning information for ALVIN-ATLANTIS II deep submersible science and for expeditionary use of ships operated by UNOLS Institutions. Two workshops will be held during the winter, 1983-1984, and will consider interest or intent in using the ALVIN-ATLANTIS II for submersible science or any UNOLS ship for expeditionary research during 1985, 1986 or 1987.

Background: Over the last several years it has become apparent that the task of matching time on the seagoing ships and platforms operated by UNOLS Institutions with requests for the use of those facilities by skilled individual investigators is becoming critical and requires careful advanced planning. The situation is especially critical in two instances: The ALVIN deep submersible, operated as a National Oceanographic Facility in UNOLS, generates many more requests for dive time than can be accommodated. With the advent of the ATLANTIS II as support ship for ALVIN, operations can be considered throughout the world's oceans. Secondly, the oceanographic community's need for UNOLS ships to support extended expeditions to remote areas or to mount investigations requiring significant amounts of ship time or multi-ship operations over several years requires careful advanced planning to be conducted efficiently.

UNOLS has addressed these critical planning requirements in two ways.

The ALVIN Review Committee (ARC), Robert W. Corell, Chairman, which is charged with making scheduling and operational recommendations concerning ALVIN deep submersible science, over the past few years has been soliciting statements of interest or intent to use ALVIN two, three and more years into the future. (The ALVIN-ATLANTIS II Workshop held December, 1982 at the fall AGU meeting was one such effort that successfully garnered information for planning 1984 and 1985 ALVIN-ATLANTIS II operations.)

In May, 1983, the UNOLS National Expeditionary Planning Committee (UNEPC), George Shor, Jr., Chairman, was established to "provide communications between scientists, operating institutions and funding agencies that will allow the timely and effective planning of major expeditionary operations by UNOLS Member Institutions. The UNEPC shall establish such communications mechanisms as are desirable and necessary to provide community-

wide information on probable and possible future vessel operations pertaining to extended or logistically complex voyages and shall provide preliminary schedules for these voyages. The UNEPC together with the ALVIN Review Committee and appropriate operating institutions, shall coordinate the planned use of special facilities such as Seabeam, Multichannel Seismic, Submersible Operations and others as may be deemed necessary with the expeditionary voyage schedules".

UNEPC and ARC announce and will host two workshops during the winter 1983-1984 to generate planning information.

The first workshop (see and distribute to your co-workers the attached announcement) will be held:

December 4, 1983
9 a.m. - 5 p.m.
Japanese Pavillion
Cathedral Hill Hotel
San Francisco, California

This workshop will emphasize planning information for ALVIN-ATLANTIS II operations in 1985, 1986 and 1987. The information considered will be Notifications of Intent or Interest in ALVIN-supported deep submersible science during 1985-1987. It is requested that Notifications submitted by individual investigators provide the information indicated on the attached.

ALVIN Submersible Science Planning
Notification of Intent

At the Workshop, brief presentations are invited from individuals in attendance, within the time available. Written Notifications of Intent will receive equal consideration. NOTE that tentative plans have the ALVIN-ATLANTIS II operating in the Pacific through most of 1985. Plans have not been projected for 1986 or 1987, and interests in any ocean will be entertained.

Notifications of Intent to participate in expeditionary science requiring support from other UNOLS ships will also be entertained and can be presented at the December workshop. The UNEPC notes especially that programs supported through Joint Oceanographic Institutions, Inc. (deep ocean drilling), the Office of Naval Research (Special Focus programs) and the National Science Foundation's Division of Polar Programs are likely to require significant ship time in the Southern Ocean in winter 1985-1986 and beyond. Representatives from JOI, ONR and DPP are being asked to provide projections of their programs for the benefit of investigators at the Workshop.

A second workshop (see and distribute to your co-workers the attached announcement) will be held:

January 22, 1984
9 a.m. - 5 p.m.
(Room to be specified)
Fairmont Hotel
New Orleans, Louisiana

This workshop will emphasize planning information for expeditionary research requiring UNOLS ship support during 1985, 1986 and 1987. It is requested that Notifications submitted by individuals provide the information indicated on the attached.

UNOLS NATIONAL EXPEDITIONARY PLANNING
Notification of Intent

At this workshop, brief presentations will be invited from individuals in attendance, within the time available. Written notifications on interest in expeditionary research will receive equal consideration. Notification of interest in using any UNOLS institutions ships for any extended or logistically complex voyages in any ocean during 1985, 1986 or 1987 will be entertained.

The UNEPC notes especially that programs funded through Joint Oceanographic Institutions, Inc. (deep ocean drilling), the Office of Naval Research (Special Focus programs) and the National Science Foundation's Division of Polar Programs are likely to require significant ship time in the Southern Ocean in winter 1985-1986 and beyond. The Committee is especially anxious to learn from individual investigators and institutions of their intent to participate in these Southern Ocean programs. Representatives from JOI, ONR and DPP are being asked to provide projections of their programs for the benefit of investigators at the Workshop.

Notifications of Intent to participate in ALVIN-ATLANTIS II operations during 1985-1987 will also be entertained and can be presented at the January workshop.

It is requested that individual investigators inform UNEPC or ARC of their interests or intentions to employ UNOLS institutions ships or ALVIN by providing the information indicated in the attached Notification forms. For those who wish to participate in the December 1983 workshop, Notifications should reach the UNOLS Office (the address on the forms) by November 20, 1983. For those who would participate in the January 1984 workshop, Notification should reach UNOLS by January 5, 1984.

Investigators should be aware that their Notifications of Interest are needed to provide information to and alert UNOLS Institutions of important projected investigations of expeditionary nature. The Notifications will not, of course, change the need for the timely submission of science proposals to funding agencies or of Ship Time Requests (for specific ships, specified projects) to UNOLS and UNOLS Institutions.

We are hopeful that these two workshops will provide valuable information on community plans for expeditonary science during 1985, 1986, 1987 and beyond. We will distribute the information broadly among UNOLS Institutions, the community of oceanographic investigators and federal agencies.

Sincerely,

George Shor, Jr.
Chairman, UNEPC

Robert W. Corell
Chairman, ARC

Distributed by:

William D. Barbee
Executive Secretary, UNOLS

WDB:gm
Attachments

ALVIN Submersible Science Planning
Notification of Intent

Submit to: Chairman, ARC
UNOLS Office, WB-15
School of Oceanography
University of Washington
Seattle, WA 98195

Principal Investigator:

Name
Title
Address
Telephone Number

Institution
Names of Other Co-Investigators

Principal Program Objectives: (Use additional sheets as necessary)

Areas of Proposed Operations:

Expected Years of Operations (for multi-year proposals):

Anticipated Foreign Clearances: (For work within 200 nm of coastal states)

Names and Affiliations of Foreign Collaborators (if any):

Approximate Dates of Proposed Work:

Suitable Alternate Dates:

Number of Dives Anticipated:

Anticipated Size of Scientific Party:

Special Facilities Needs (including SEABEAM on ATLANTIS II):

Special Constraints (time, radio isotope clean ship, etc.):

Proposed Funding Sources:

Do you intend to participate in the December 1983 Workshop?
Do you intend to participate in the January 1984 Workshop?

Signature: Date:

UNOLS NATIONAL EXPEDITIONARY PLANNING
Notification of Intent

Submit to: Chairman, UNEPC
UNOLS Office, WB-15
School of Oceanography
University of Washington
Seattle, WA 98195

Principal Investigator:

Name
Title
Address
Telephone Number

Institution
Names of Other Co-Investigators

Principal Program Objectives: (Use additional sheets as necessary)

Areas of Proposed Operations:

Expected Years of Operations (for multi-year proposals):

Anticipated Foreign Clearances: (For work within 200 nm of coastal states)

Names and Affiliations of Foreign Collaborators (if any):

Approximate Dates of Proposed Work:

Suitable Alternate Dates:

Vessel Requirements (Nos., large intermediate):

Anticipated Size of Scientific Party:

Special Facilities Needs (including SEABEAM):

Special Constraints (time, radio isotope clean ship, etc.):

Proposed Funding Sources:

Do you intend to participate in the December 1983 Workshop?
Do you intend to participate in the January 1984 Workshop?

Signature: Date:

ANNOUNCEMENT

The

ALVIN REVIEW COMMITTEE

and the

UNOLS NATIONAL EXPEDITIONARY PLANNING COMMITTEE

Will hold an OPEN WORKSHOP

to generate Planning Information on

ALVIN-ATLANTIS II
DEEP SUBMERSIBLE SCIENCE

and

EXPEDITIONARY INVESTIGATIONS
USING UNOLS SHIPS
DURING 1985, 1986 and 1987

TIME: SUNDAY, DECEMBER 4, 1983
9 a.m. - 5 p.m.

PLACE: JAPANESE PAVILLION
CATHEDRAL HILL HOTEL
SAN FRANCISCO, CALIFORNIA

Everyone with an interest in the ALVIN program or expeditionary oceanographic investigations program is welcome. The ARC and UNEPC invite concise presentations from investigators who have submitted proposals or letters of intent for the use of ALVIN-ATLANTIS II during 1985-1987. Intent to use UNOLS ships in expeditions in the Southern Ocean during the 1985-1986 Austral summer are also of special interest. Representatives from NSF's Division of Polar Programs, the Office of Naval Research and Joint Oceanographic Institutions, Inc. are being invited to present briefs on their program plans. For further information contact:

William D. Barbee
UNOLS Office, WB-15
School of Oceanography
University of Washington
Seattle, WA 98195
(Telephone: 206-543-2203)

ANNOUNCEMENT

The

UNOLS NATIONAL EXPEDITIONARY PLANNING COMMITTEE

and the

ALVIN REVIEW COMMITTEE

Will hold an OPEN WORKSHOP

to generate Planning Information on

EXPEDITIONARY INVESTIGATIONS TO BE
SUPPORTED BY UNOLS SHIPS

and

ALVIN-ATLANTIS II
DEEP SUBMERSIBLE SCIENCE
DURING 1985, 1986 and 1987

TIME: SUNDAY, JANUARY 22, 1984
9 a.m. - 5 p.m.

PLACE: (Room to be Designated)
Fairmont Hotel
New Orleans, Louisiana

Everyone with interest in expeditionary oceanographic investigations (to remote areas or logistically complex) that would require support by UNOLS ships or in ALVIN operations is welcome. The UNEPC and ARC invite concise presentations from investigators who have interest or intend to pursue expeditionary investigations or employ ALVIN during 1985-1987. Intent to use UNOLS ships in expeditions in the Southern Ocean during the 1985-1986 Austral summer are of special interest. Representatives from NSF's Division of Polar Programs, the Office of Naval Research and Joint Oceanographic Institutions, Inc. are being invited to present briefs on their program plans. For further information, contact:

William D. Barbee
UNOLS Office, WB-15
School of Oceanography
University of Washington
Seattle, WA 98195
(Telephone: 206-543-2203)

1/18/84

UNOLS EXPEDTIONARY PLANNING

Notification of Intent Summaries

	Investigator	Associates	Program Objective	Area	Time Years	Vessel Requirements	Size Party	Funding	Remarks
1.	Jannasch, H.W.	Karl, Mopper, Cuhel, Taylor Gagosian, Scranton, Wirsen	Interdisciplinary Study on Microbial-Chemical Processes in the Black Sea.	Black Sea.	Apr-Nov 1986 or 1987 3 weeks	one, large	25	NSF, ind. grants	Isotope will be used.
2.	Thompson, G.	Bryan, W.B. Schilling, J.G.	Detailed bathymetric and geophysical study of Tristan platform near MAR axis, dredging of submarine rocks for petrological & geochemical study.	South Atlantic; MAR axis and vicinity of Tristan da Cunha.	Nov-Feb 1985/86 or 1986/87 (2nd cruise year later)	one, large with SEABEAM	10-12	NSF	SEABEAM magnometer & dredging - weather window.
3.	Richardson, P.L.	Price R.L.	Deploy and recover one deep - ocean mooring with current meters.	Approx. 32°N, 25°W.	Deploy Fall '84 Recover Fall '86	medium, (e.g., Oceanus)	10	NSF	Need crane and deck space for mooring & SOFAR equipment.
4.	Brink, K.H.	Schmitz, W.J.	Deploy two long deep-ocean current-meter moorings.	28°N, 55°W, and 22°N, 55°W.	Deploy Dec. '85 Recover Dec. '87	small/medium (e.g., Oceanus)	4	ONR	Need a crane, deck space and CTD/hydro winch.
5.	Bryden, H.L.		Deploy one short current-meter mooring on sill of Straits of Gibralter & recover after one year.	Straits of Gibralter.	Deploy Fall '84 Recover Fall '85 2-3 days each	small/medium	3	ONR	Need small crane and Loran. (Can piggy back--2,3 day trip out of Spain).
6.	Bryden, H.L.		Deploy six long deep-ocean current-meter moorings in the Gulf Stream. Recover array after one year deployment.	38°N, 67°W.	Deploy Fall '85 Recover Fall '86	medium (e.g., Oceanus)	10	NSF	Need crane, CTD/ hydro winch, Loran, large deck space, etc.
7.	Luyten, J.R.		Deploy ten long deep-ocean current-meter moorings to study Agulhas current south of Africa. Recover after two years.	15°-30°, 35°-44°S, Capetown to Capetown.	Deploy Jan. '85 Recover Jan. 1987	large	12	ONR	Need crane, CTD/ hydro winch & large deck space; sat. nav.
8.	Weller, R.A.		Set surface booys with instruments for horizontal air-sea interaction study.	250 nautical miles SE of Azore Islands.	Deploy Spring '85 Recover Spring '86	medium-large (Oceanus too small)	10	ONR	Need crane, sat., nav., CTD/hydro winch and large deck space.

Sponsor Code
1. Proposal to be submitted
2. Proposal submitted
3. Funded

UNOLS EXPEDITIONARY PLANNING

Notification of Intent

Investigator	Associates	Program Objective	Area	Time Years	Vessel Requirements	Size Party	Funding	Remarks
9. Schmitt, W.J.		Final recovery of fourteen long deep-ocean current-meter moorings. Pacific Zonal Experiment. CTD stations at mooring sites & along 165° and 175°W.	Along 162°E,175°E, 175°W, 152°W between 28°N and 41°N.	Fall 1985 (Nov. preferred)	large	12	ONR	Need crane, CTD winch, sat. nav., large deck space.
10. Gagosian, R.B.	Duce, R. Merrill, R. Turekian, K. Prospero, J. Fitzgerald, W. Patterson, C. Glass, C.	Measurement of Pacific Ocean air/sea exchange of selected trace elements. Identification of sources for these substances in the marine atmosphere. Investigation of mechanisms of exchange of these substances across sea/air interface.	North of Hawaii 35°N, 170°W.	1985 2-35 day legs.	large (Knorr or Melville)	25	NSF Renewal SEAREX, Phase IV.	Need a ship large enough to construct a large tower on the bow. Need SAIL system, ability to install radar system and weatherfax.
11. Warm Core Rings Program	Wiebe, P.H. Schink, D.R. Flierl, G.R. Kester, D.R. McCarthy, J.J. Joyce, T.M.	Multi-disciplinary study of Gulf Stream warm core rings.	North Atlantic.	Winter 1985-1986	Atlantis II (and Knorr).		NSF	Low noise acoustic properties (letter only).
12. Lyle, M.W.	Dymond, J. Finlas, N.G. Schrader, H. Suess, E.	Equatorial Pacific paleoproductivity project—to quantify production of biogenic material in glacial climatic conditions.	Equatorial Pacific.	Spring 1986 30 days	Wecoma	12	NSF-2	Need deep sea winch; hydro winch.
13. Lorenzen, C.		Biological investigation of phyto-zooplankton interactions in the upper portion of the water column. Deployment of sediment trap arrays & receptive sampling.	Area west of Palmer Peninsula.	1985-1986 Austral Summer 21 station days	Thompson Class	12-14	NSF	Need standard features, inc. CTD, radio direction finder, winches, hydrowire capabilities.
14. Knox, R.A.	Various, Tropic Heat	Tropic Heat - Study of heat, mass, momentum, balances in upper equatorial Pacific.	Equator, 130W-145W	1986 or 1987	large, 1 Melville and 2 Horizon/Oceanus	NSF		2 cruises/yr. for large ship, 2 ships for 1 mo. in between. Will use FLIP.

Sponsor Code
1. Proposal to be submitted
2. Proposal submitted
3. Funded

UNOLS EXPEDITIONARY PLANNING

Notification of Intent

Investigator	Associates	Program Objective	Area	Time Years	Vessel Requirements	Size Party	Funding	Remarks
15. Austin, J.	Tucholke, B. Sawyer, D.	Study of structural and stratigraphic evolution of conjugate passive continental margins in the So. Atlantic. To trace patterns of erosion/sediment drift development.	South African/South American margins to 4000m, from 20S-55S.	Nov. 1985 - Feb. 1986 or Sept. 1985 - Apr. 1986	Large	13	ONR/NSF MCS.	Need SEABEAM,
16. Detrick, R.	Fox, P. Karson, J.	Site survey to establish tectonic framework for locating potential ODP drilling sites.	24°N on Mid-Atlantic Ridge.	Late 1984 Early 1985	large	12	JOI (NSF)	Need SEABEAM, SEA MARC I.
17. Detrick, R.	Mutter, J.	Use MCS techniques to map Moho reflections and possible intercrustal reflections across western No. Atlantic fracture zones.	Southwest of Bermuda.	May-July 1985 Oct-Nov 1985	large	12	NSF	Need MCS. Do not schedule during hurricane season.
18. Detrick, R.	Mutter, J. Orcutt, J.	Use multichannel seismic techniques to map reflections from the magma chamber and Moho in the vicinity of the EPR crest.	9°N, 13°W on East Pacific Rise.	Mar-Apr 1985 Jan-Mar 1985 May-Aug 1985 (not in hurricane season)	1 large (2nd ship possibly)	12-14	NSF	Need MCS, SEABEAM. Second ship for explosive shooting.
19. Mutter, J.	Buhl, P. Dalziel, I.	Structure of the Andien Cordillera including So. Georgia.	So. Chile, Argentina, So. Georgia.	Late 1985 Early 1986 Austral Summer	R/V Conrad	15-20	NSF DPP	Need MCS.
20. Mutter, J.	Buhl, P. Larson, R.	Crustal structure of the N.W. Australian margin inc. Exmouth Plateau.	N.W. Australia.	Late 1985 Early 1986	R/V Conrad + foreign vessel	15-20	NSF Industry	Need vessel with MCS capability.
21. Weissel, J.	Forsyth, D.	Study of the abnormally high heat flow into the Indian Ocean and to examine the Mobo beneath the regions of deformed crust in that region.	Central Indian Ocean SE of Sri Lanka.	Late 1985 Early 1986	large	15	NSF	Need digital single-channel large airgun seismics, heat flow.
22. Hayes, D.	Lewis, S. Anderson, R. Ladd, J.	Geophysical investigation of the northern continental margin and the SW sub-basin of the S. China Sea for studying tectonic evolution of the region.	South China Sea.	Mid-1985 Late 1985	large (Conrad)	20	NSF, PRC, Industry	Need SEABEAM, multi-channel seismics, heat flow.

Sponsor Code
1. Proposal to be submitted
2. Proposal submitted
3. Funded

UNOLS EXPEDITIONARY PLANNING

Notification of Intent Summaries

	Associates	Program Objective	Area	Time Years	Vessel Requirements	Size Party	Funding	Remarks
23. Lewis, S.	Hayes, D.	Geophysical investigation of the northern and southern terminations of the Manila Trench.	Manila Trench.	1985 1986	large	20	NSF	SEABEAM, Multi-channel seismics, gravity.
24. Shor, A.	LaBrecque, J.	Site surveys in advance of drilling.	Weddell Sea.	Austral Summer 1985-86	large	15-20	JOI, (NSF)	MCS or large-airgun digital single channel seismics SEABEAM, Sea Marc.
25. LaBrecque, J.		Geophysical Investigations of the Antarctic Peninsula.	Antarctic Peninsula.	Austral Summer 1985-86	large	15-20	DPP, NSF	Multi-channel seismics, gravity. SEABEAM.
26. Flood, R.	Shor, A. Ryan, W.	Investigations of submarine channel morphology with side-scan sonar.	Amazon Submarine Fan.	1985-86	large	20	NSF	Deep-tow winch/ handling system (Sea Marc I).
27. Ladd, J.	Langseth, M.	Investigations of morphology, structure and heat flow of an active subduction system.	Barbados Ridge.	Early 1985 Late 1985	large	20	NSF-3	SEABEAM, multi-channel seismics, heat flow.
28. Cochran, J.		Investigations of a young rifting basin. Second field effort following work scheduled in 1984.	Red Sea.	1986-1987	large	20	NSF	SEABEAM, multi-channel seismics.
29. Various Shor, A. (Notice of Intent)		Studies of marine geology and geophysics of the southern Atlantic.	Southern Atlantic.	1985-1987	mostly large		ONR	SEABEAM, seismic and gravimeter.
30. Lawver, L.		To investigate the evolution of a RFF triple junction to determine its migratory route.	Bouvet Triple Junction, Southwest Indian Ridge.	1985-1986	Washington or Conrad	15	NSF ONR	SEABEAM, Dredging, GPS, SEAMARC.
31. Schlater, J.G.	Lawver, L.	To take heat flow measurements in the Eastern Scotia Sea to evaluate thermal regime of known age crust above subducted slab.	Eastern Scotia Sea.	Jan-Feb 1986	Intermediate	10-15	NSF	SEABEAM.

Sponsor Code
1. Proposal to be submitted
2. Proposal Submitted
3. Funded

UNOLS EXPEDITIONARY PLANNING

Notification of Intent Summaries

Investigator	Associates	Program Objective	Area	Time Years	Vessel Requirements	Size Party	Funding	Remarks
32. Childress, J.J.	Johnson, K.L. Hessler, R. Somero, G. Felbeck, H. Lutz, R.	Studies of physiology, biochemistry and ecology of hydrothermal vent animals.	Galapagos Rift.	1987	Melville, ALVIN/AII	40	NSF	
33. Wishner, K.		Study of plankton distribution relative to chemical and physical oceanographic parameters.	South Atlantic or Brazil Current.	1986 or 1987	Intermediate (Endeavor)	16	NSF ONR	Mocness, CTD

Sponsor Code
1. Proposal to be submitted
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1/18/84

ALVIN/ATLANTIS II

Notification of Intent Summary

	Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	No. Dives	Remarks
1.	Carney, R.S.	Childress, J. Cluck, D.	Approx. 119°W, 32'N; S. Calif. Borderland off San Diego.	A study of a benthopelagic holothuroid dominated deep-sea benthic boundary layer fauna. Survey and sampling.	NSF-3	Nov/Dec 1984		10	Time Request.
2.	Craig, H. Welhan, J.	Kim, K-R.	Approx. 18.5N, 144W; (Mariana Trough).	Studies in the Mariana Trough: Hydrothermal vents and basalts.	NSF-2	Early 1985		10 (Part of 20 dive, 29 day program)	Copy of Science Proposal.
3.	Leinen, M.	Schilling, J-G Anderson, R.N. Rea, D.K. Pearce, J.	Marianas Trough.	Investigation of the Marianas "Mounds" hydrothermal area.	NSF-1 ONR-1	Winter 1985		10 (Part of 20 dive 29 day program)	Notice of Intent.
4.	Keating, B.	Winterer, J. Heim, J. Clague, D.	Johnston Island. (Central Pacific)	Geological and tectonic studies of the Johnston Island Seamount.	NSF ONR	March-Sept.		12	SEABEAM requested.
5.	Delaney, J.R. Johnson, H.P.	Rhodes, M. Leinen, M. Lupton, J. Dymond, J. McDuff, R. Karsten, J. Canadians	N.E. Pacific - Juan de Fuca Ridge.	To continue the long-term study of ocean crustal accretion processes on the Juan de Fuca Ridge.	NSF-3	Summer 1986 or 1987		25	Request for temp. probes, video cameras, and sampling capability, magnometer.
6.	Karl, D.M.	Epp, D. McMurtry, G.	East Rift Zone of Kilauea; Loihi Seamount.	Investigation of geothermal syutems and morphology of East Rift Zone of Kilauea and Loihi.	NOAA-1 Sea Grant	1985		10	Notification of Intent.
7.	Macdonald, K.C.	Fox, P.J. Hopson, C. Sibson, R. Atwater, T.	East Pacific Rise 9°N to 13°N. (near Acapulco)	Investigation of overlapping spreading centers on the East Pacific Rise. (See ALVIN proposal dated Feb. 22, 1983.)	ONR-2	Feb-June 1985 or 1986		13	Notice of Intent. (Re earlier proposal)

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ALVIN/ATLANTIS II

Notification of Intent

Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	No. Dives	Remarks
8. Curl, H.C.		Juan de Fuca Ridge: 44°39.0'N/130°22.5'W.	To determine the phase and elemental composition of debauching hydrothermal fluids and processes occurring in hydrothermal plumes formed in the water column.	NOAA Sea Grant	June-Oct 1985/86/87		15	Request use of vent samplers; A/AII for night hour water sampling. Mount "clean" Van.
9. Jumars, P.A.	Smith, C.	33°17'N, 118°38'W.	Studies of "Biogenic Sediment Mounds, Infaunal Disturbance and Bioturbation in the Bathyal Deep Sea".	NSF-1	Early 1985	(In series of 4, 3 and 3, separated by month, then year)	10	Notice of Intent that earlier proposal will be resubmitted.
10. Clague, D.	Normark, B. Koski, R.	Offshore Northern California.	To sample and map hydrothermal deposits on the Gorda Ridge.	USGS-2	June-July 1985 or 1986	May-Aug. 1985 or 1986	15	Mini Angus, SEABEAM requested.
11. Koski, R.	Vallier, T. Ballard, R. Clague, D.	Vicinity of Guam.	To sample and map hydrothermal deposits and their geologic setting in the Marianas Trough and on Esmeralda Bank in the Marianas Islands.	USGS	1985-1986		15	Mini Angus, SEABEAM requested.
12. Fox, P.J.	Karson Kastens Kidd Macdonald	Clipperton Transform at 10.00°N, 104°00'W on the EPR.	To determine the structural manifestations of a fast-slipping ridge - transform-ridge plate boundary: Clipperton Transform.	NSF-3	1985		20	Notice of Intent.
13. Bryan, W.B. Thompson, G.	Ballard, R.	East Pacific Rise 12°N.	Detailed study of volcanism; ridge morphology, geochemistry, petrology and hydrothermal activity - along ridge axis between two transforms.	NSF-3	Late 1985	1986	14	Notice of Intent. Surface ship investigation (1984) funded.
14. Boehlert, G.W.	Ralston, S. Gooding, R.M.	S.E. Hancock Seamount (29°48'N, 179°04'E) N.W. Hancock Seamount (30°15'N, 178°45'E)	Population assessment, fishery habitat, and behavior of living resources of the S. Emperor, N. Hawaiian Ridge Seamounts.	NOAA Nat'l Fisheries Center, Honolulu	June-July 1985	July-Aug. 1985	18	NOAA Proposal. coordinated with schedule of associated fishery research vessel. Request for Onboard CTD, current meters & bottom pingers.

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ALVIN/ATLANTIS II

Notification of Intent

Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	No. Dives	Remarks
15. Kulm, L.D.	Lewis, B. Carson, B. Moore, J.C.	Continental slopes off central Oregon and southern Washington, and abyssal plain off central Washington.	Investigation of process of sediment lithfication and fluid expulsion and their relation to deformation of the accretion zone along the lower continental slope off central Oregon and southern Washington.	NSF Submarine Geology & Geophysics	1986 Summer	1987 Summer	15-20	SEABEAM on AII.
16. Dymond, J.	10 listed	Gorda Ridge.	Evaluate hydrothermal and crustal accretion processes on the Gorda Ridge; Compare sediment covered and open hydrothermal systems.	NSF	July-Aug. 1986 or 1987	June, Sept. 1986 or 1987	15	Notice of Intent. Temp. probes, Heat flow magnometer cameras, water and rock sampling.
17. Kulm, L.D.	Abbot D. Embley, R.	Blanco Fracture Zone (connecting Gorda and Juan de Fuca Ridges).	Origin and evolutionary history of of pull-apart basins in Blanco Fracture Zone.	NSF/NOAA	Summer 1986	Summer 1987	10	Will be submitted through NOAA and through ARC.
18. Hey, R.N.	Sinton, Atwater, Christie, Delaney, Johnson, Macdonald Miller, Morgan, Searle, Sleep.	Near Galapagos Islands; 2.6°N, 95.5°W.	ALVIN/AII investigation of the Galapagos 95.5°W propagating rift system.	NSF	Late 1984	Early 1985	18	Updates March 1983 Dive Request.
19. Hey, R.N.	Craig, Macdougall, Hawkins, Schilling, Sinton, Macdonald, Ballard, Fox and Franchetneau.	Near Easter Island; 25°S, 115W.	Study superfast spreading center and microplate tectonics and geochemistry.	NSF	Late 1984	Early 1985	20	AII with ALNAV, ANGUS, SEABEAM, dredging, water sampling.
20. Hessler, R.	Smith, K. and others		To study the structure and limited dynamics of rocky-bottom, deep-sea communities. Studies of standing crop, faunal composition and fine-scale distribution. Respiration measurements of currents and sedimentation are planned.	NSF	1987		15-20	Multi-year project.
21. Ballard, R.	Smith, K. and others	Two legs, WHOI - Azores - WHOI.	To demonstrate the utility of ARGO-JASON system for operational and scientific purposes.	Navy	Summer 1986		15	Presentation at 12/4/83 workshop.

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ALVIN/ATLANTIS II

Notification of Intent

Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	No. Dives	Remarks
22. Edmond, J.		Larson Seamount. Guaymas 1985. Red Sea 1987. Marianas/Okinawa.	Importance of hydrothermal vents to ocean scale geochemistry; Ore deposit fixing/formation.	Not specified	1985, 1987 Other		Guaymas 15, Larsen 5	Presentation at 12/4/83 workshop.
23. Hussong, D.		Marianas Back Arc.	Investigation of small mounds and PAC-MAN Seamount.	NSF	1985		14	Updates earlier requests.
24. Shor, A.	Piper, D.	Eastern Valley, Laurentian Fan, Off Grand Banks.	Investigation of turbidity current - generated bedforms near 1929 Grand Grand Banks earthquake epicenter.	NSF Geologic Survey of Canada.	Summer 1986	Summer 1987	10 10	Cooperative W. Bedford Inst., Canada.
25. Rabb, J.	Booth, J. Hampson, J.	U.S. east coast 30°30' to 39°N.	Investigation of Continental Slope and upper Continental Rise geomorphic features and processes.	USGS	Jul-Aug 1985	Mid-Jun-Sep	12	Jul-Aug weather window.
26. Rona, P.	Thompson, G. Edmond, J.	Mid-Atlantic Ridge active hydrothermal sites between 12° and 26°N.	To determine hydrothermal mass and heat transfer at a slow-spreading oceanic ridge by sampling hydrothermal effluents and precipitates and measuring heat transfer.	NOAA NSF	May-Aug 1986		12	SEABEAM, ALNAV, ACNAV, ANGUS.
27. Rubbard, D.K.	Ogden, J. Gladfelter, W. Williams, S. Gill, I.	St. Croix, U.S.V.I.	To continue documentation started in 1981 on the transportation of shallow water detritus into the deep basin north of St. Croix, U.S.V.I.	NSF	1985-1986		7	Ability to track ALVIN's position on the bottom.
28. Hollister, C.D.	Nebble	South Icelin Basin-Rockall Trough region.	To study the response of deep sea sediments to high energy events, inc. mud waves & debris flows. Deploy event-triggering stress-measuring systems for 1987 retrieval.	NSF-1	Summer 1986			ALVIN-SEABEAM.
29. Levin, L.A.	DeForest, J. Martin, A., UNAM	EPR 20°N,109°W.	Sample Fauna of Larson's Seamounts for investigations of seamount hydrothermal & hydrodynamic effects on community structure.	ONR	1985		2	Mexican clearance. Work proposed in conjunction with Edmond/Lonsdale.

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ALVIN/ATLANTIS II

Notification of Intent

Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	No. Dives	Remarks
80. Hessler, R.R.	Ingram, C.L.	Panama Basin.	To perform trapping experiments designed to determine the standing crop of demersal amphipods.	DOE	1985/1986		5	Elevator possibly needed.
81. Moore, F.	Monnotte, J.	East Pacific Rise near 13°N, 104°W.	To make coordinated measurements of the role of mass and heat transfer in sulfur cycle.	NSF-1 NOAA-1 ONR-1	Sept-Nov 1985	July-Aug 1985		SEABEAM, ALNAV ACNAV, ANGUS.
82. Thistle, D.	Eckman, J.	Off San Diego.	To determine the hydrodynamic and refuge effects of an abundant polychaete's mud tent on the harpacticoid copepod community in the San Diego Trough.	NSF-1	Spring 1985	2 dive series must be at least one month apart	6+6	Notice of Intent.
83. Grassle, J. F. Edmund, J.	15 listed	27°0.15'N, 111°24'W.	Biology and Chemistry of the Guaymas Basin Hydrothermal Vents.	NSF-1	1985	Not Dec-Mar	18+15	Notice of Intent.
84. Grassle, J. F. Whitlatch, R.	Aller, R. Honjo, S. Murray, J.	Panama Basin 5°20'N, 81°56'W.	In situ benthic boundary layer experiments on particle flux and animal-sediment relationships.	NSF-1	Early 1986		15-20	Main trawl winch, ALNAV, hydrowinch.
85. Hussong, D.M.	Fryer, P.	Mariana fore-arc from 19-20°N.	Observe and sample fore-arc igneous extrusive flows of altered plutonium rocks mobilized by diapirism. Observe and sample possible hydrothermal vents.	NSF-1 ONR-3	1985		14	ANGUS, SEABEAM.
86. Berg, C.J.	Jones, M.L. Williams, A.B.	East Pacific Rise (20°5'N, 109°6'W); Guaymas Basin (27°02'N, 111°24'W).	Larval recruitment and colonization at deep-sea hydrothermal vents.	NSF-1	Winter 1984	Spring 1984	4	Ability to call Benthos 5-year transponders and to relocate sites.
87. Malahoff, A.	Embley, R. Hammond, S.	Blanco Fracture Zone, Gorda Ridge and Juan de Fuca Ridge.	Polymetallic sulfide deposit and hydrothermal systems and geological processes along small rift segments.	NOAA-1	1985	Summer 1985-1986	20	SEABEAM, bottom camera, winch, transponder navigation.
88. Lutz, R.		Eastern Pacific (Galapagos Rift and Guaymas Basin).	To determine how sedentary organisms at hydrothermal vents locate and colonize the restricted geographically - isolated environments.	NSF-3	Early 1985	Deploy & retrieval dates extremely flexible	4	Notice of Intent.

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ALVIN/ATLANTIS II

Notification of Intent

	Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	No. Dives	Remarks
39.	Childress, J.J.	Johnson, K. Somero, G. Hessler, R.	Galapagos Rift.	Studies of physiology, biochemistry and ecology of hydrothermal vent animals.	NSF	Late 1987	Early 1988	20	ALNAV.

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1984 USGS PACIFIC MARINE GEOLOGY

VESSEL	JAN	FEB	MAR	APR	MAY	JUN
S. P. LEE	ANTARCTICA		L. HOWE	TONGA	VANUATU	SOL
POLARIS		SHIPYARD OVHL			EAST	COAST
GLORIA					WEST	COAST
AII-ALVIN						
UNKNOWN						C. CAL

VESSEL	JUL	AUG	SEP	OCT	NOV	DEC
S. P. LEE	PNG	MARIAN.	MARSH.	LINE IS	SHIPYARD	RWC
POLARIS	AND	GREAT	LAKES	DMA		
GLORIA	E.E.Z.					
AII-ALVIN			J DE F			
UNKNOWN	C. CAL N.	CAL GORDA	J DE F			

1985 USGS PACIFIC MARINE GEOLOGY

VESSEL	JAN	FEB	MAR	APR	MAY	JUN
S.P. LEE	REDWOOD	CITY	M. FAN S. CAL	N. CAL	E. GULF	W. GULF
POLARIS	GULF	COAST	DMA			
GLORIA / SEA MARC					ALASKA	MARGIN
AII-ALVIN						
UNKNOWN				CAL	CAL A. FAN	CAL

VESSEL	JUL	AUG	SEP	OCT	NOV	DEC
S.P. LEE	ALEUT.	BERING	ARCTIC	TO RWC	OR HAWAII	
POLARIS						
GLORIA / SEA MARC	AND	E.E.Z.				
AII-ALVIN		GORDA	M. FAN			
UNKNOWN	CAL	GORDA	CAL			

REQUEST FOR OCEAN DRILLING PROPOSALS/PARTICIPATION

The Ocean Drilling Program replaces the recently completed Deep Sea Drilling Project (DSDP). A new and larger deep sea drilling vessel with expanded capabilities including a longer drill string, bare rock spud-in, enhanced logging and the potential for riser drilling will replace the D/V Glomar Challenger. Drilling is scheduled to commence in late 1984. Planning is now underway for the tentative schedule shown below. The drill ship will then proceed to the Pacific Ocean and circumnavigate the earth at least twice during the 10 year program. Proposals for drilling, downhole experiments, etc., for all areas worldwide are now being solicited by JOIDES (Joint Oceanographic Institutions for Deep Earth Sampling).

Proposals are reviewed by the JOIDES science advisory structure (see diagram) which includes three thematic and five regional panels and four service panels. The advisory structure is supplemented as required by specialized working groups and task groups. Approved proposals will be integrated into the drilling program by the Planning Committee under the direction of the JOIDES Executive Committee. Contact the JOIDES Office for procedure regarding proposal submission.

JOIDES is also seeking persons with scientific or technical expertise to serve on advisory panels for approximately 2 year terms. Anyone wishing to be considered should send his or her Vita to the JOIDES Office.

JOIDES is an international organization supported in part by the U.S. National Science Foundation (Ocean Drilling Program) representing ten U.S. academic institutions, and by the science agencies of other member countries which presently include Canada, France, the Federal Republic of Germany, Japan, and the United Kingdom. Participation in the Ocean Drilling Program and science advisory structure is open to anyone, and is not limited to representatives of JOIDES institutions or member countries.

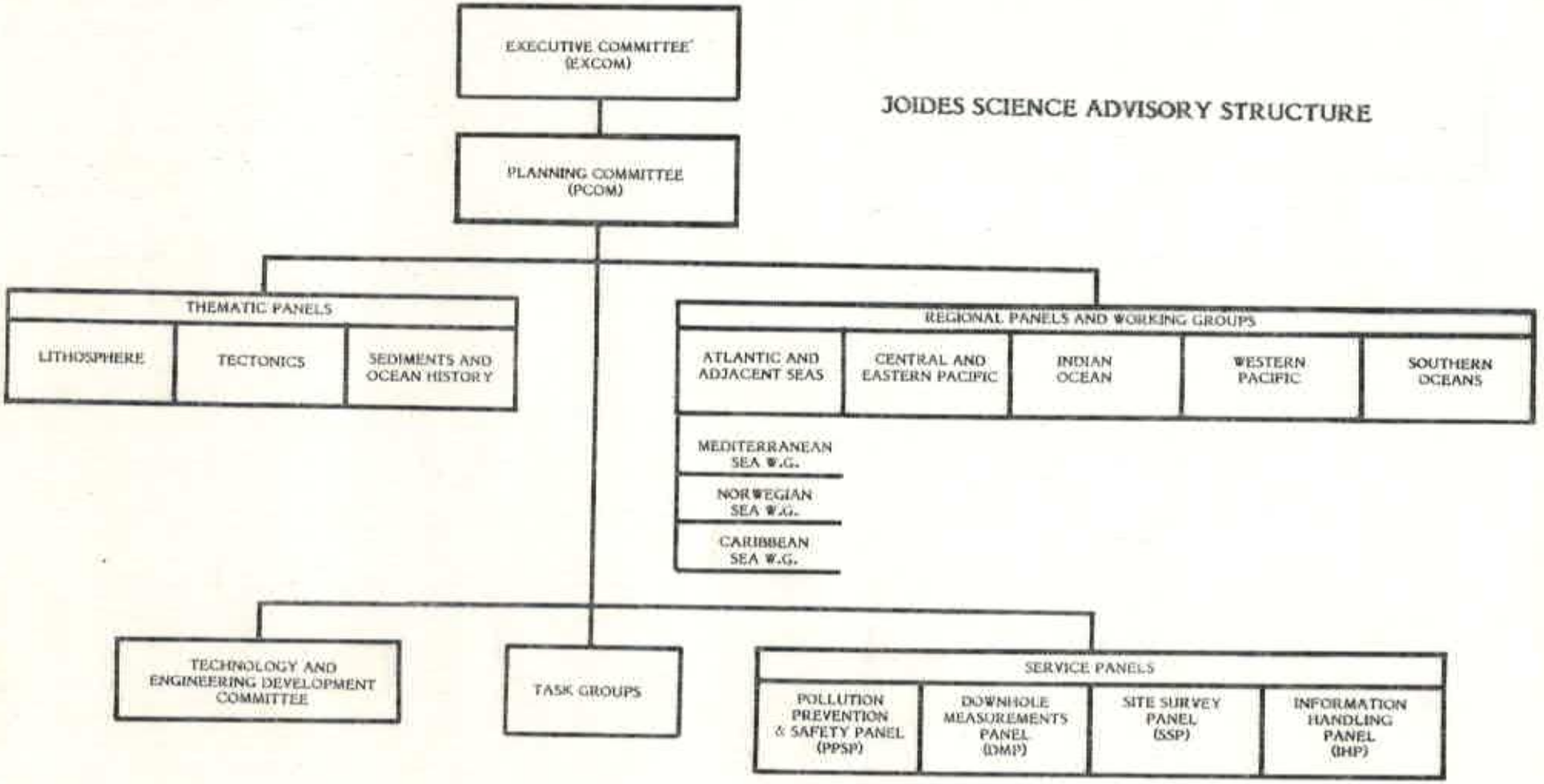
JOIDES Office
Rosenstiel School of Marine and
Atmospheric Science
University of Miami
4600 Rickenbacker Causeway
Miami, Florida 33149 USA
Phone: (305) 361-4168

TENTATIVE DRILLING SCHEDULE 1984–1987

1984	Oct	Gulf of Mexico
	Nov	"
	Dec	Bahamas
1985	Jan	"
	Feb	Barbados
	Mar	"
	Apr	Mid Atl. Ridge
	May	"
	Jun	Labrador Sea
	Jul	"
	Aug	Norwegian Sea
	Sep	"

1985	Dec	Mediterranean Sea (or
1986	Jan	Equa. Fracture Zone)
	Feb	NW Africa
	Mar	"
	Apr	Costa Rica/Venezuela
	May	/Columbia
	Jun	Hole 504B
	Jul	"
	Aug	Peru Trench
	Sep	"
	Oct	Chile (triple junction)
	Nov	"
	Dec	Weddell Sea
1987	Jan	"

JOIDES SCIENCE ADVISORY STRUCTURE



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NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

DIVISION OF POLAR PROGRAMS

DEC 1 1983

Dr. George Shor, Jr.
Chairman, UNOLS Expeditionary
Planning Committee
Scripps Institute of Oceanography
University of California, San Diego
La Jolla, California 92093

Dear Dr. Shor:

I am pleased to see that interest in oceanographic research in the Southern Ocean has reached a level that requires specific advance coordination, and strongly support the concept of UNOLS workshops to facilitate the planning of future expeditionary research.

The Division of Polar Programs expects to continue its policy of utilizing approximately 120 days of shiptime in the Southern Ocean in alternate austral summer seasons. While there have been some variations to such a schedule in the past, we expect to have such a requirement in the 1985/86 austral summer.

It is not possible for us to define a specific research program two years in advance, however the expressed interests of the scientific community focused on biological, geological/geophysical, and, to some extent, physical oceanography primarily in the Atlantic sector. We may therefore wish to have a UNOLS vessel with Seabeam and multi-channel seismic, as well as biological capabilities operating out of Punta Arenas in the 1985/86 season.

Several of my staff will be attending the AGU Meeting in San Francisco and the Ocean Sciences Meeting in New Orleans, and will be able to provide further elaboration of our projected program.

Sincerely yours,

Edward P. Todd
Division Director

cc: Mr. William D. Barbee
Executive Secretary, UNOLS
School of Oceanography
University of Washington
Seattle, Washington 98195

Dr. M. Grant Gross, NSF