

UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

SUMMARY REPORT

OF

ALVIN REVIEW COMMITTEE

WORKSHOP AND MEETING

December 2, 3, 1984 - San Francisco, California

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Summary Report of ARC Meeting

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UNOLS

ALVIN Review Committee

Summary of Workshop

December 2, 1984

San Francisco, California

Forward: On November 1, 1984 the Chairman of the ALVIN Review Committee distributed a letter announcing to the ALVIN and oceanographic communities a workshop to generate planning information for ALVIN/ATLANTIS II deep submersible science (Appendix I). The workshop, held December 2, 1984, in San Francisco, California just preceding the AGU/ASLO Ocean Sciences meeting was to consider interest or intent in using ALVIN/ATLANTIS II for submersible science during 1986, 1987 or 1988.

Over the past several years it had become apparent that the task of matching time on the seagoing facilities operated by UNOLS institutions with requests by skilled investigators for the use of those facilities is critical and requires careful advanced planning. One situation is especially critical: The ALVIN deep submersible, operated as a National Oceanographic Facility in UNOLS, generates many more requests for dive time than can be accommodated. Since ATLANTIS II has been the support ship, the potentials for increasingly complex science and for world wide operations compound planning problems.

The ALVIN Review Committee (ARC), Robert W. Corell, Chairman, charged with making scheduling and operational recommendations concerning the ALVIN program organized the workshop, one of an annual series, to hear statements of interest or intent to use ALVIN two, three and more years into the future and thus provide a basis for planning.

The Workshop: The Workshop was convened at 9:00 a.m., December 2, 1984 in the Golden Gate Room, Cathedral Hill Hotel, San Francisco, California. About 60 potential ALVIN investigators, members of the oceanographic community, and agency representatives were in attendance, together with ARC members:

- | | |
|------------------------------|-------------------------------|
| Robert W. Corell, UNH, Chair | Barrie B. Walden, Submersible |
| Jody W. Deming, JHU | Program Manager, WHOI |
| Peter A. Jumars, UWA | |
| Daniel Karig, Cornell | William D. Barbee, UNOLS |
| Geoffrey Thompson, WHOI | |
| Jeffrey Weissel, L-DGO | |
| Mark Wimbush, URI | |

After Chairman Corell's short introduction and welcome, Barrie Walden gave a reprise of the 1984 ALVIN-ATLANTIS II season and an outlook for 1985. The 1984 season was, operationally, the most successful ever, and, one hopes,

Mariana Region

8, 28	Craig, Hawkins	Craig
2	Stakes/Ballard	Stakes
26	Leinen	Leinen

Mid-Pacific

48	Keating	Keating
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West Florida Escarpment

24	Karl	Karl
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In summarizing the presentations, the Chairman noted that the total of all notices was for more than 650 dives to be accomplished during the period 1986-1988. Dives would be proposed for the northwest Atlantic and throughout the north and equatorial Pacific. There is strong evidence of coordination among potential investigators working in the same region or on related problems. The information submitted is very helpful to the ARC in planning for future ALVIN dive years, and gives strong indication that the ALVIN program will continue to be exciting and productive.

Secretary of Navy Initiative on Use of Navy Deep Submersible Assets: Keith Kaulum, ONR, discussed the Secretary of Navy's recent announcement of initiatives to reinvigorate Navy efforts in oceanography. Among the 15 initiatives announced by the Secretary was one to optimize management and use of deep submergence assets. The plan to implement the initiative would focus on SEA CLIFF and TURTLE. It includes enhanced technical support (through WHOI and Scripps) and reserves 60 days per year for ocean research use of the submersibles. ONR will act as the Navy's agent to prioritize research. One intent is to promote a large multi-disciplinary program, including operations to 6,000 meters in FY-1986 and FY-1987. There may be user fees for technical equipment and support. There is need for a more capable support ship than is now available.

The research submersible, NR-1, is also available for use by the ocean research community. Terms for NR-1 use together with a general description are given in the bulletin *Submarine NR-1 Nuclear Powered Research and Ocean Engineering Vehicle*. Proposals for NR-1 use should be submitted to Keith Kaulum at ONR (Appendix IV).

The Workshop was adjourned at 5:00 p.m.

Conduct a modest deep diving program in the Atlantic during the middle of 1986.

Conduct an expanded diving program in the Pacific (both eastern and western) in late 1986 through 1987.

The Committee reaffirms its earlier recommendations for projects in the Mariana region but must recommend they be deferred to 1987.

The program for 1988 is open.

Subsequent to these recommendations, the 1985 ALVIN-ATLANTIS II schedule was further modified to interrupt operations in October, 1985 and return to Woods Hole for maintenance on ATLANTIS II and overhaul of ALVIN. This displaced work previously scheduled off the California coast and in the vicinity of the Hawaiian Islands. These last modifications are described in a February 27, 1985 letter to the ALVIN community (Appendix V).

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
(206) 543-2203

November 1, 1984

Dear Colleague:

This letter, together with the attached announcements and forms to note interest, is to advise you of a UNOLS workshop to generate planning information for ALVIN-ATLANTIS II deep submersible science. The workshop will be held December 2, 1984 in San Francisco, CA, just preceeding the AGU/ASLO Ocean Sciences meeting, and will consider interest or intent in using the ALVIN-ATLANTIS II for submersible science during 1986, 1987 or 1988.

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. (Use of UNOLS ships for expeditionary purposes will be addressed in a second workshop.)


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 the first such workshop that successfully garnered information for planning 1984 and 1985 ALVIN-ATLANTIS II operations.)

Notice of Intent to Use ALVIN Individual investigators who intend to use ALVIN for deep submergence research during 1986, 1987 or 1988 are invited to inform the ARC by providing the information requested in the attached form for

ALVIN Submersible Science Planning
Notification of Intent

1. There is no firm deadline for submitting these forms, but to be most useful to the ARC they should be received by November 20, 1984.
2. Notices of Intent will be considered for any ocean area during 1986, 1987 and 1988.
3. Investigators who requested 1985-86 ALVIN time early in 1984 and were notified by the Committee that they had been recommended need not (but may if they desire) submit Notice of Intent for that same work.

Sincerely,


for Robert W. Corell, Chairman
ALVIN Review Committee

RWC:JD

UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

ANNOUNCEMENT

The

ALVIN REVIEW COMMITTEE

Will Hold an OPEN WORKSHOP

to generate Planning Information on

**ALVIN-ATLANTIS II
DEEP SUBMERSIBLE SCIENCE
PROPOSED FOR 1986, 1987 and 1988**

**TIME: SUNDAY, DECEMBER 2, 1984
9 a.m. - 5 p.m.**

**PLACE: GOLDEN GATE ROOM
CATHEDRAL HILL HOTEL
SAN FRANCISCO, CALIFORNIA**

Everyone with an interest in the ALVIN program is welcome. The ARC invite concise presentations from investigators who have submitted proposals or letters of intent for the use of ALVIN-ATLANTIS II during 1986-1988. For further information contact:

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



This summarizes Notices of Intent to use ALVILN received by December 2, 1984. They are numbered by sequence of receipt and grouped by geographic region.

- I. EPR/Galapagos/E.Pacific Seamounts
- 23. Mottl
 - 31. Bryan (Thompson)
 - 3. Batiza
 - 7. Levin/Wishner
 - 11. Sayles/Von Herzen
 - 40. Childress
 - 44. Craig
- II. Panama Basin
- 30. Grassle
 - 39. Hessler
 - 46. Aller
- III. Guaymas
- 5. Jannasch
 - 29. Grassle
- IV. California Basins
- 13. Thistle/Eckman
 - 34. Emerson
- V. Gorda-Juan de Fuca
- 1. Gurl/Normark
 - 21. Hammond
 - 22. Carson (Lewis)
 - (23). Mottl
 - 27. Moore
 - 32. Delaney
 - 33. Johnson
 - 41. Dymond (Fisk)
 - 42. Kulm
 - 43. Suess
- VI. Mariana Region/West Pacific
- 2. Stakes/Ballard
 - 8. Craig
 - 26. Leinen
 - 28. Haukins
- VII. General (Pacific?)
- 35. Hessler
 - 48. Keating, B.
- VIII. W. Florida Escarpment
- 24. Karl
 - 4. Jannasch
- IX. Blake Plat./Puerto Rico/V.I.
- 9. Flood
 - 12. Mullins
 - 15. Edgar
 - 20. Edgar
 - 25. Ballard
 - 38. Hubbard
- X. E. Coast Continental Shelf/Slope
- 14. Robb
 - 16. Booth
 - 17a. O'Leary
 - 17b. Schwab
 - 19. McGregor
 - 36. Shor, A.
- XI. Mid Atlantic Ridge
- 37. Rona
- XII. N. E. Atlantic Ridge
- 6. Hollister
- XIII. Amazon Fan
- 10. Flood

Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	Days	Partners
1. Curt, R.C. Norfolk, U.R.		Southern Juan de Fuca Ridge; 48° 30' N/120° 22.5' W; Corda Ridge; 41.5° to 42.5° N/127° W	Geological mapping and hydrothermal effluent monitoring.	NOAA/ USGS	June through October 1986		20	
2. Stokes, D. Ballard, B.		Marianas Trough Back-Arc Basin	Alvin/Alvin investigation of the Marianas Trough Back-Arc Spreading Center.	NSF	Early 1986		10-12	
3. Batiza, R.		Seamounts, East Pacific	Igneous Petrology (Dates determined by Farnari proposal).		1985		Not specified	
4. Jannasch, H.W. Wysen, C.O. Molyneux, S. J. Cavanaugh, C.H. Colubis, S.		West Florida Escarpment	Microbiological studies at the West Florida Escarpment vent site.	NSF	open (1986)		4	
5. Jannasch, H.W.		Guaymas Basin, Gulf of California	Continued microbiological studies at the Guaymas Basin vent site.	NSF	open (1987 or 1988)		7	
6. Hallister, C.	Flood, B.	Rockall Basin-N.A.Z. Atlantic	Sediment dynamics of Rockall Trough.	NSF or ONR	Mid summer 1987, 1988		20	
7. Levin, L.A. Mishner, K.		East Pacific Ocean 12-13° N, 102° 30' W	Dynamics of biological communities on deep seamount sediments: an experimental investigation of benthopelagic zooplankton and bottom fauna in high energy settings.	NSF ONR	Mid 1986, mid 1987		15, 1986 5, 1987	
8. Craig, R.	Rey, R. Ballard, R. Edmond, J.	Mariana Trough	Submersible studies in the Mariana Trough hydrothermal vents and basalts.		Early 1986		10	Includes provision for Alvin, and tentative coordination with other Mariana investigations.
<p>Sponsor Code</p> <p>1. Proposal to be submitted</p> <p>2. Proposal submitted</p> <p>3. Funded</p>								

ALVIN/ATLANTIS II
Notification of Intent

Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	No. of Dives	Remarks
17a. O'Leary, B.V.	Booth, J. Veebeck, E. Twitchell, D.	Between 66° 30' W, 70° 30' W along New England continental slope	To obtain evidence of structural deformation at sites along continental slope, to determine extent of structural control on mass movement features, to determine recency of and potential for mass movement.	USGS	Summer 1986, 1987		12 (6 each season)	
17b. Scheub, B.C.	O'Leary, D.W.	New England Seamounts	Study the distribution and composition of ferromanganese-oxide crusts.	USGS	1986-1987		12 (6 each season)	
18. Dillon, W.P.		West Florida Escarpment	To obtain additional geochemical and morphological signatures which can be used to identify seepage sites located elsewhere.	USGS	Summer, Fall 1987		14	
19. McGregor, S.A.	Stobbsfield, W.L. Stanley, B.J.	Baltimore and Wilmington Canyons	Study submarine canyon processes on the slope and upper rise.	USGS	Summer 1988		10	
20. Edgar, H.T.		Caribbean, Nova Canyon and Anagada Passage	Study sedimentary processes of Nova Canyon, sample walls for correlation with MCS grid, and study origin and significance of thick rock outcrop of north coast of St. Croix.	USGS	1988		12	
21. Harwood, S.	Embley, B. Hassoth, G. Curl, N.	Juan de Fuca Ridge: Axial Seamount	Detailed geological mapping and OBS experiment on axial seamount, near and midfield characterization of physical and chemical properties of hydrothermal vent fluids on axial seamount, and mineralogy and structures of vent chimneys	NOAA	June through October 1986		20	
22. Carson, R.	Lewis, B. Kula, V. Kodomo, K.P. Suez, E.	Lower continental slope - Juan de Fuca abyssal plain off Oregon	To characterize initial deep-sea sediment deformation and lithification at a convergent continental margin.	NSF	June - Sept. 1986	June - Sept. 1987	15	

Sponsor Code

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

ALVIN/ATLANTIS II
Notification of Intent

Investigator	Associate	Area	Purpose	Sponsor	Date	Alternate	No. Dives	Remarks
31. Bryan, M.B.	Baliard, R.	East Pacific Rise Axis 10° 15' N - 11° 45' N 103° 40' W	In this area to study the variation of petrology and geochemistry of lavas erupted along the strike of the axis, the structural/tectonic variation along the strike, hydrothermal activity and its geological setting, and the relationships of off-axis structures to axial processes.	NSF	Mid to late 1986		20	
32. Delaney, J.R.	Grass, Basile, Johnson, Leirich, Lewis, McDuff, Lupton, Speiser, Taghon, Scholte	Juan de Fuca Ridge about 48° N	To establish a long-term real-time instrumental observatory to measure concurrent variations in hydrothermal output, earthquake activity, strain rates, fluid residence time, volcanic and subsurface magmatic activity.	NSF, OHR, NOAA	June 1984	June 1987 or 1988	15-17	
33. Johnson, H.P.	McLennan, J.R. and others	Juan de Fuca Ridge: Endeavour Segment 48° N 130° W; Axial Seamount 48° N 130° W	To provide the second set of time series measurements initiated on leg 1, NOAA, characterize the along and across strike distribution of volcanic and hydrothermal activity, and examine sub-surface expressions of hydrothermal alteration using advanced electrical and magnetic techniques.	NSF, NOAA, OHR	August 1986 or 1987	September or early October	18	
34. Emerson, S.	Reiners, C.	California Borderlands	To study calcium carbonate preservation in deep sea sediments.	NSF	Early 1986, late 1985		6	
35. 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	

*Submitted November-December 1983, and carried forward to this summary.

Sponsor Code

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

ALVIN/ATLANTIS II

Notification of Intent

INVESTIGATOR	ASSOCIATES	AREA	PURPOSE	SPONSOR	DATE	ALTERNATE	NO. DIVES	REMARKS
42. Kulm, L.D.	Lewis, B. Moore, J.C.	Central Oregon continental slope	To define the structural and stratigraphic framework of the fluid venting areas and to determine their relationship to the nature and quantity of fluid discharge.	NSF	July-August 1986	July-August 1987	10	
43. Suess, E.	Kulm, L.D. Carson, B.	Oregon continental margin	To study mass flux and chemistry of fluids expelled by subduction-accretion from the Oregon and underthrust margin.	NSF	July-August 1986	Late June or early Sept. 1986, or 1987.	5	
44. Craig, H. Ballard Fox Hey MacDonald, K MacDougall		EPR 13° S - 35° E	Submersible investigation on EPR. (Comprehensive geological/geogr./geochemical investigation).		Jan.-Mar. 1988	Austral Summer 1987-1988	60	
45. Hecker, B.	Grassie, J.F. Heazler, R. Lutz, R. Turner, R.	West Florida Escarpment 26°N, 85°W	Biological investigation of W. Florida Escarpment cold seep fauna. Physiology and ecology.	NSF	Early 1986		15 - 1st yr. 10 - 2nd yr	
46. Aller, R.	Grassie, J.F. Whitlatch Honjo	Panama Basin 5° - 21°N, 81-36°W	Chemistry of deep-sea biogenic structures near sediment water interface	NSF	1986, 1988	-	2 per cruise	
47. Katig, D.	Hussong	Tincor Transsect	Geophysical study of: role of diapirs, slumps, etc. etc. deformation, water egress, age control.	NSF	?	-	10	
48. Keating, B.	Taylor, G. MacKenzie, F.	Johnson Atoll	Geological and biological studies	NSF	1987	-	16	

Submarine NR-1 Services Application Format

1. Requests for NR-1 services should indicate:
 - a. Project description, goals and progress to date.
 - b. Proposed role of submarine NR-1 in the project. Highlight how unique NR-1 capabilities would be used.
 - c. NR-1 configuration changes needed to support the project, the time required to effect the changes, and the industrial level required.
 - d. Specific operating conditions needed to accomplish the project.
 - e. Underway times and location of operations.
 - f. The project funding profile and an approximation of the amount to be expended on the NR-1 portion of the project.
 - g. The program element number and task or project number assigned.
 - h. The name and telephone number of a point of contact within the project.
2. Submit request to:

Mr. Keith Kaulum
Office of Naval Research (Code 421SP)
800 N. Quincy Street
Arlington, VA 22217


UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

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of university oceanographic facilities

UNOLS Office, WB-15
School of Oceanography
University of Washington
Seattle, Washington 98195
(206) 543-2203

February 27, 1985

TO: ALVIN Community

FROM: William D. Barbee 
Executive Secretary, UNOLS

SUBJECT: ALVIN/ATLANTIS II Schedule, 1985

This transmits the current schedule for ALVIN-ATLANTIS II operations during 1985. Some factors that have led to recent changes in the 1985 schedule and to apparent breakdowns in communicating those changes are also discussed.

The current ALVIN/ATLANTIS II schedule for 1985 is attachment 1, dated January 25, 1985.

ALVIN Review Committee recommendations for 1985 were made at a review meeting in May, 1984 (see ARC meeting report for May 14, 15, 1984). These recommendations were for operations extending throughout 1985 and into 1986, in both the eastern and western Pacific. Subsequent to the ARC meeting and on general acceptance of ARC recommendations, operators at W.H.O.I. formulated a 1985 schedule. The schedule was distributed to the community through UNOLS (SHIP.SCHED85 bulletin board on electronic mail) and by W.H.O.I. operators directly to investigators named on the schedule. The schedule was refined at intervals during June-November, 1984, and those refinements were distributed in the same manner.

The ARC held planning workshops and meetings in December, 1984, at which time they were apprised that the schedule for ALVIN maintenance and overhaul would have to be advanced to early 1986 - prior to embarking on extensive work in the western Pacific. In addition, the ARC recommended the addition of a few dives in the eastern Pacific. The ARC made recommendations to agency managers for schedule changes (attachment 2) that would interrupt operations at the end of 1985, allowing maintenance and overhaul of both ATLANTIS II and ALVIN. Subsequently, negotiations among agency science program managers, facilities managers and operators concerning logistic, operational, and funding factors led to curtailment of 1985 operations in October, 1985, as shown on the January 25, 1985 schedule.

The UNOLS Office has received complaints from several investigators concerning this sequence of events. Clearly, the Office did not adequately communicate schedule changes to investigators involved. Steps are being taken to improve that communication. (Changes will be distributed to individual investigators in addition to reliance on SHIP-SCHED bulletin boards.) The issues raised concerning the process by which schedule changes have been reached must be addressed by funding agencies, operators and the ARC in concert.

WDB:JD

Attachments: 2

20 December 84 ALVIN/A-II Schedule Revision

Comments reflect changes made to previous schedule dated November 6, 1984.

1. Malahoff cruise moved from February to September/October. This provides increased time in January for Sea Beam installation.
2. Childress cruise moved forward six days to depart February 26. This is the earliest date possible for the MELVILLE per George Shor teletail message of December 13.
3. January and February revised to reflect increased port time required for Sea Beam delivery and installation.
4. Port stop in Equador eliminated.
5. Port stop in Panama replaced with Puntarenas (Honjo).
6. Honjo, Hey and Fornari cruises moved forward four days.
7. Increased Fornari cruise to the NSF requested 15 DOS (not possible previously).
8. Extensively modified Guaymas schedule:
 - a) Added Baross per ONR request (2 DOS at EPR, 2 DOS at Guaymas in conjunction with Edmond).
 - b) Added 2 DOS to Ballard's cruise for German television filming (outside user).
 - c) Added two port stops to Edmond leg since this dive series now involves four Co-Chief Scientists (Edmond, Berg, Levin, Baross) with a major site relocation during a risky weather period. (Short, high wind storms are reported to be common in the Guaymas area during the months of August and September.)

Recommendations for assignment of Guaymas/EPR use days are as follows:

<u>Ballard Leg</u>	<u>Guaymas</u>	
Ballard	5	ONR
Navy VIP	1	ONR
German TV	2	OUTSIDE
Grassle (Recon)	1	NSF
Grassle	2	NSF
Transit & Port	2	NSF
	4	ONR

DRAFT OF
December 5, 1984

ALVIN REVIEW COMMITTEE

Recommendations of December 3, 1984

Operations of the AII-ALVIN for Late 1985 Through 1988

The Alvin Review Committee, following the 1984 Long Range Planning Workshop in San Francisco, recommended a revised general framework for ALVIN operations for late 1985 through 1988. The Committee's recommendations are based upon two key considerations:

(1) The experience with an expanded (over 175 dives/year vs 150 dives/year in previous years) AII-ALVIN operations during 1984 has clearly demonstrated that it will not be possible to extend the overhaul period from the current practice of once every 12-15 months to 36 months as had been planned for the next few years. It is now clear that safe and prudent operations require an overhaul after 300-350 dives, or every 24-30 months, particularly on a schedule that includes a significant number of dives exceeding 3000 meters. Specifically, the Committee feels that an expedition to a deep, remote project area such as the Mariana, could not succeed without first completing a major overhaul (3-4 months).

(2) The projected needs for the best possible program of deep submergence investigations for the ALVIN as outlined by investigators in the Letter of Intent process, and by the presentations given by research investigators at the ARC/UNOLS annual Long Range Planning Workshops in both 1983 and 1984, and as projected by the funding agencies (NSF/ONR/NOAA). Important ALVIN supported research has been proposed in the Atlantic as well as in both the eastern and western Pacific.

Therefore, the committee recommends to the funding agencies the following schedule for the period late 1985 through 1988.

Complete the 1985 schedule for ALVIN as tentatively outlined in the schedule date November 6, 1984.

Conduct a full overhaul of ALVIN during the first 3 to 4 months of 1986.

Conduct a modest deep diving program in the Atlantic during the middle of 1986.

Conduct an expanded diving program in the Pacific (both eastern and western) in late 1986 and through much of 1987. The Committee reaffirms its earlier recommendations for several projects in the Mariana region, but must recommend that they be deferred to 1987. The Committee will entertain requests for additional projects throughout the Pacific for late 1986 and 1987.

The program for 1988 is open, and will be guided by ARC Long Range Planning Workshops. It should be noted that ALVIN will require an overhaul in mid-to-late 1988.