

UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

ALVIN REVIEW COMMITTEE

Summary Report

of the

May 6, 7, 1985 Meeting

Carriage House

Woods Hole Oceanographic Institution

Woods Hole, Massachusetts

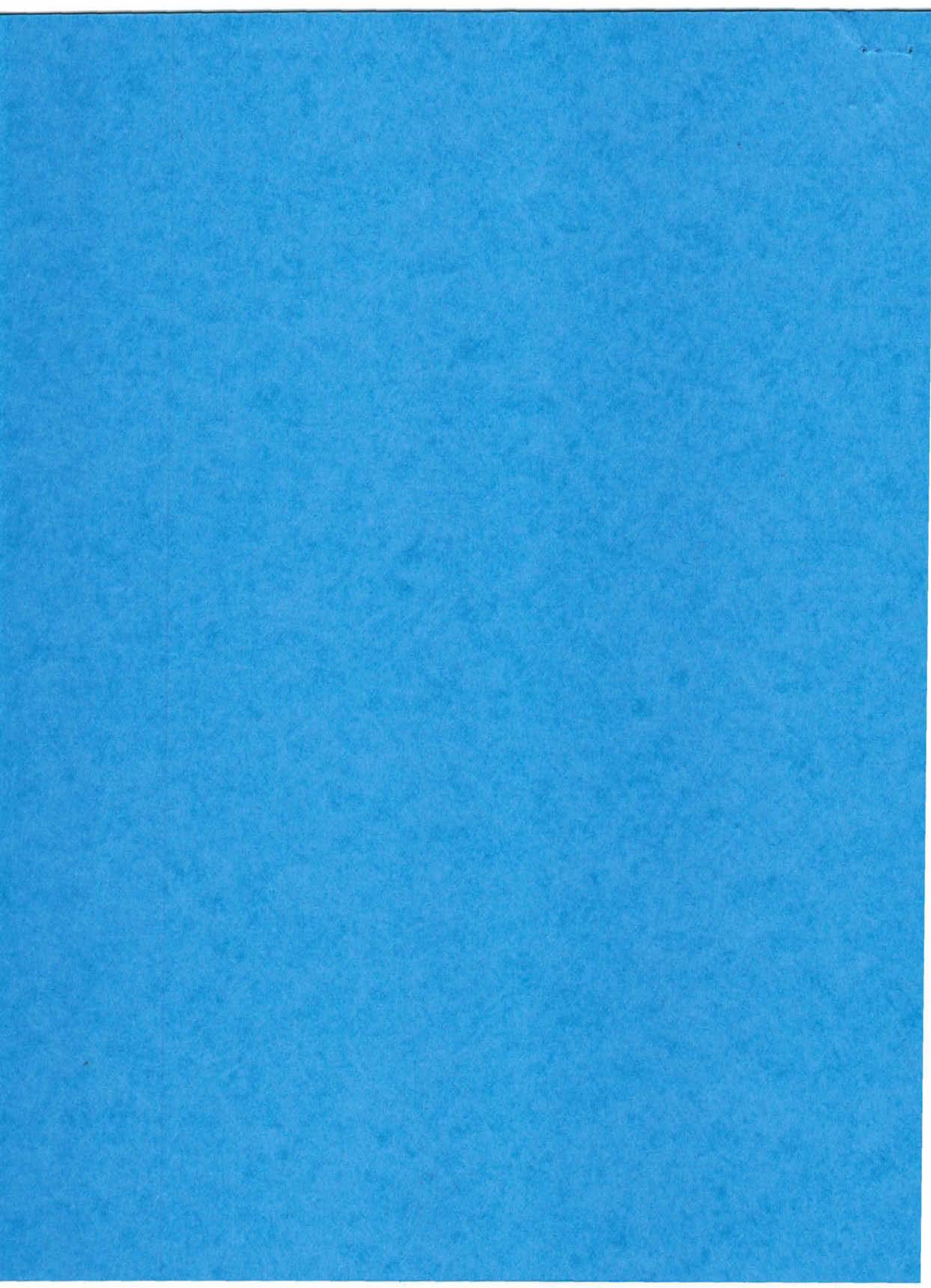
CONTENTS

Minutes of Meeting

APPENDICES

- I. ALVIN Review Committee Roster
- II. Agenda
- III. Summary, ALVIN Shiptime Requests, Recommended Earlier
- IV. Summary, ALVIN Shiptime Requests, Received for Review
- V. Opportunities for Oceanographic Research
DSRV ALVIN, 1986/87
- VI. Tentative ALVIN Schedule, 1986
- VII. Letter Requesting ALVIN Program Review
- VIII. ALVIN Dive Summary, 1964-1984
- IX. Rules for Review of ALVIN Dive Requests





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NATIONAL UNIVERSITY OF SCIENCE AND TECHNOLOGY
UNIVERSITY OF ENGINEERING AND TECHNOLOGY

Department of Mechanical Engineering
Faculty of Engineering
University of Engineering and Technology
Lahore

Subject: Mechanical Engineering
Topic: [Illegible]



ALVIN REVIEW COMMITTEE

Minutes of Meeting

May 6, 7, 1985

Carriage House

Woods Hole Oceanographic Institution

Woods Hole, Massachusetts

The meeting was called to order by *Robert W. Corell, Chairman*, at 8:00 a.m., May 6, 1985. Committee members, funding agency representatives from NOAA, ONR and NSF, W.H.O.I. Operator representatives and UNOLS Office staff present during the meeting:

ALVIN Review Committee

R. W. Corell, Chairman

J. K. Cochran

J. W. Deming

P. A. Jumars

D. E. Karig

G. Thompson

J. Weissel

M. Wimbush

G. D. Grice, *ex-officio*

Agency Representatives

E. Finkle, NOAA

K. Kaulum, ONR

B. T. Malfait, NSF

J. McMillan, NSF

P. Penhale, NSF

W.H.O.I. (Operators)

J. D. Donnelly

B. Walden

UNOLS Office

W. D. Barbee

The ARC roster is Appendix I.

George Grice, Committee member, was not able to be present for all of the review of dive requests. In the interest of consistency in the review process, he elected not to participate in any reviews.

The Chairman, as part of his welcome and introduction, reviewed the agenda (Appendix II). He emphasized the ARC functions of review and oversight of the ALVIN supported science program.

Dive requests recommended in May and December, 1984. Several dive requests had been earlier recommended by the ARC, but not yet scheduled (Appendix III). The Committee reaffirmed those recommendations without further review. At the same time it was noted that agency decisions had not been made to fund the science proposals associated with some of those recommendations.

Review of Dive Requests for 1986, 1987. Dive requests for 1986 and 1987, and submitted for the May, 1985 review are summarized in Appendix IV. The requests were submitted in response to the UNOLS announcement: *Opportunities for Oceanographic Research DSRV ALVIN, 1986/1987* (Appendix V). Thirty-seven dive requests were received for 578 dives. The requests were for investigations in the north Atlantic, including the mid-Atlantic Ridge, the Gulf of Mexico, including the west Florida Escarpment, and in the Pacific, the Panama Basin, East Pacific Rise and nearby seamounts, Guaymas Basin, California Basins, Gorda-Juan de Fuca Ridges, vicinity of Hawaii, mid-Pacific islands and Mariana and other regions in the western Pacific. The Committee reviewed the dive requests individually and recommended 17 of them (representing about 200 dives) for scheduling. As noted above, approximately 90 dives had earlier been recommended by the Committee. (These latter dives had been requested in the California basins, vicinity of Hawaii, and mostly in the Mariana region.) The recommendations were made to ALVIN/ATLANTIS II operators at Woods Hole Oceanographic Institution and to funding agency representatives from the National Science Foundation, the National Oceanic and Atmospheric Administration, and the Office of Naval Research.

Schedule Recommendations, 1986/1987. Based on both the new recommendations and those from 1984, a provisional schedule was developed for 1986 (Appendix VI). The ALVIN ATLANTIS II would take up diving operations in the North Atlantic in mid-March, and would be there until August. Work in the eastern Gulf of Mexico would be done along transit to the Panama Canal and the Pacific. Projects would be undertaken in the Panama Basin and California Basins October until December, after which ALVIN ATLANTIS II would go to San Diego where they would finish the year. This schedule is contingent on completions of 1986 ALVIN overhaul and maintenance work in time to begin operations in mid-March, and on science proposal funding decisions by support agencies.

No schedule was developed for 1987. The most likely schedule for 1987 would have ALVIN/ATLANTIS II complete recommended work in the vicinity of Hawaii and the mid Pacific enroute to the Mariana region. After completing recommended work in the Mariana region (late winter, spring) the ATLANTIS II ALVIN would return to the eastern Pacific, most likely the Gorda-Juan de Fuca-Oregon margin area. Work would be undertaken there during the weather

window (June/July-September), followed by transit to work in the California basins and farther south. It is anticipated that ALVIN/ATLANTIS II would return to Woods Hole soon thereafter. A schedule for 1987 will not be developed until after the 1986 ARC review.

Recommendations are indicated in the summary (Appendix IV) and, for 1986, included in the tentative schedule (Appendix VI).

Preliminary discussion was held to develop terms of reference for an ARC report reviewing the ALVIN Program. This review and report would be in response to John McMillan's March 12, 1985 letter to the Chairman (Appendix VII). The sense of the ARC discussion was that a report might cover two general areas: how the ALVIN Review Committee carries out its functions together with how that protocol affects submersible science, and also a degree of scientific overview for the ALVIN program. The report would be for NSF, NOAA and ONR, the three funding agencies with, perhaps, wider distribution of an executive summary. The report notwithstanding, the Committee noted that it was necessary to straighten out the mix of long range planning (2-3 years) and scheduling. The sense was that hereafter dive requests would be solicited (and so schedule recommendations would be made) only one year into the future. A variety of program considerations were raised, without firm conclusion. The Committee then adopted an outline for the report (to serve as terms of reference).

An Overview Review of Submersible Supported Science:

An ALVIN Review Committee Perspective.

A. Science

Strategies to facilitate the best science program

Overview of the patterns of science and accomplishments

Projection of science trends

B. Process of management of the program/facility

Long range planning process

Review of schedule process

Policy concerning outside users

ALVIN

ATLANTIS II

Additional submersibles

New construction

Navy submersibles

ARC roles, scope, responsibility

C. Operations

Logistics

Technology, status and development

Operations overview

D. ALVIN Review Committee

Policies and process

Ties with agencies

Additional sponsoring agencies

Terms of reference and working groups for the report will be set in July, with an October target date for the report.

Information from agency representatives. John McMillan, NSF/OCFS, reported that NSF foresees about level funding for ocean programs over the next two years. The possibility is real that ALVIN, as with most programs could suffer an effective loss due to inflation. (In 1985 layups equivalent to about two large ships are necessary.)

Elliott Finkle, NOAA reported that NOAA has long been a user of submersibles, for mission oriented projects. NOAA's Undersea Research Program, although not included in recent Administration budgets, has risen from about \$1M in FY-1980 to about \$6.5M now. Most of those funds go to outside groups, for the operation of facilities (e.g., ALVIN in support of NOAA programs, shallow water submersibles, regional undersea facilities). There is the possibility that NOAA would fund outside scientists in the future, through solicitation of proposals to do mission oriented research.

NOAA use of ALVIN in the near term will stress mission oriented research needs, especially on and at the Gorda-Juan de Fuca systems.

Keith Kaulum, ONR reported that the Secretary of the Navy's initiatives, especially concerning Navy submersible assets, have provided new emphasis for Navy and ONR oceanography. Briefly, the status of Navy submersible assets: SEA CLIFF has been certified to 6000m. TURTLE, after her fire, is due back in late 1986 or 1987. LULU is not certified as a support ship and so the only support ship is TRANSQUEST. Need for a suitable support ship is the biggest constraint to use of Navy submersibles for academic research. Efforts are underway to provide a support ship (from the commercial sector) comparable to ATLANTIS II. It could be available in about 14 months; overtures have been made to use ATLANTIS II in support of SEA CLIFF for some period in the interim.

A Technical Support Group for Navy submersible science is being developed under a Memorandum of Agreement between ONR and OP23 (who have operational control of SEA CLIFF, TURTLE, NR-1, DOLPHIN). The Group would include pilots seconded from the ALVIN Group. Funding for a larger support group begins next year.

The MOA would have use requests reviewed by the ALVIN Review Committee. (OP23 wants a single request/review arrangement for all outside users of all Navy submersibles.)

Barrie Walden, WHOI, gave a brief report on 1984 and 1985 operations, in the context of ALVIN operational history since 1964. (Appendix VIII). Although major changes were necessary to the 1985 schedule (this has earlier been exhaustively reported) fewer small revisions due to weather, etc. are now necessary. By May, 1985 only one dive scheduled for 1985 had not been made. The ALVIN staff has been augmented, in accordance with earlier requests from the WHOI operators and recommendations from the ARC.

Nighttime diving was discussed briefly. The operators are examining the consequences of an open nighttime diving policy. In general, they foresee no great technical difficulties, but intend to be institutionally and

operationally cautious. Nighttime diving notwithstanding, personnel limitations will continue to control the number of dives on a given cruise (and, in general, the number will not increase over the present number without nighttime diving).

Workshops. The Committee agreed to have winter 1985-86 workshops to solicit Notices of Intent to use ALVIN at the winter AGU, San Francisco, Ocean Sciences, New Orleans, or both.

Conflicts of Interest. Review rules concerning potential conflicts of interest were re-examined. Procedures were set to assure that the rules will be noted and followed at all reviews. The rules are in Appendix IX.

Recommendations for ARC Members. Three members of the Committee, Robert W. Corell, Chairman, University of New Hampshire, Jeffrey Weissel, Lamont-Doherty Geological Observatory and Mark Wimbush, University of Rhode Island have terms expiring in 1985. Robert Corell was willing to continue on the Committee, Jeff Weissel and Mark Wimbush suggested that turnover in their positions would be desirable, and chose not to be reconsidered.

The ARC then considered replacement candidates and recommended to UNOLS:

Robert W. Corell, University of New Hampshire
William B. F. Ryan, Lamont-Doherty Geological Observatory
George L. Weatherly, Florida State University.

(At their May 22, 1985 meeting, UNOLS accepted the three recommended candidates.)

The meeting was adjourned at noon, May 7, 1985.

8/84

UNOLS Review Committee
for DSRV ALVIN

(First Meeting 2/19/75)

<u>1975</u>		<u>1980</u>	
	Term Expires		Term
A.R. Richards, Ch., Lehigh	7/78	R.W. Corell, Ch., UNH	7/76-6/82
C.L. Drake, Dartmouth	7/76	R.N. Anderson, L-DGO	7/79-6/82
G. Grice, WHOI	7/78	J.M. Edmond, MIT	7/78-6/81
R.R. Hessler, SIO	7/77	D.E. Karig, Cornell	7/80-6/83
G. Keller, NOAA/AOML	7/77	K.C. Macdonald, UCSB	7/78-6/81
S. Murphy, U/Wash	7/76	D.C. Rhoads, Yale	7/78-6/81
C. Rooth, RSMAS	7/76	G.T. Rowe, Brookhaven	7/80-6/83
K.K. Turekian, Yale	7/78	M. Wimbush, URI	7/79-6/82
T.J. van Andel, Stanford	7/77	A.E. Maxwell, WHOI, <i>ex-officio</i>	
A.E. Maxwell, WHOI, <i>ex-officio</i>			
<u>1976</u>		<u>1981</u>	
	Term Expires		Term
A.R. Richards, Ch., Lehigh	7/78	R.W. Corell, Ch., UNH	7/76-6/82
R.W. Corell, UNH	7/79	R.C. Aller, U.Chicago	7/81-6/84
M. Gregg, U/Wash	7/79	R.N. Anderson, L-DGO	7/79-6/82
G. Grice, WHOI	7/78	D.E. Karig, Cornell	7/80-6/83
D. Hayes, L-DGO	7/79	G.T. Rowe, Brookhaven	7/80-6/83
R.R. Hessler, SIO	7/77	F.L. Sayles, WHOI	7/81-6/84
G. Keller, OSU	7/77	M. Wimbush, URI	7/79-6/82
K.K. Turekian, Yale	7/78	A.A. Yayanos, Scripps	7/81-6/84
T.J. van Andel, Stanford (resigned 9/76)		G.D. Grice, WHOI, <i>ex-officio</i>	
A.E. Maxwell, WHOI, <i>ex-officio</i>			
<u>1977</u>		<u>1982</u>	
	Term		Term
R.W. Corell, Ch., UNH	7/76-6/79	R.W. Corell, Ch., UNH	7/82-6/85
J.B. Corliss, OSU	7/77-6/80	R.C. Aller, U.Chicago	7/81-6/84
M.C. Gregg, U/Wash	7/76-6/79	J.K. Weissel, L-DGO	7/82-6/85
C.D. Grice, WHOI	2/75-6/78	D.E. Karig, Cornell	7/80-6/83
D.E. Hayes, L-DGO	7/76-6/79	G.T. Rowe, Brookhaven	7/80-6/83
A.F. Richards, Lehigh	2/75-6/78	F.L. Sayles, WHOI	7/81-6/84
K.K. Turekian, Yale	2/75-6/78	M. Wimbush, URI	7/82-6/85
R.D. Turner, Harvard	7/77-6/80	A.A. Yayanos, Scripps	7/81-6/84
A.E. Maxwell, WHOI, <i>ex-officio</i>		G.D. Grice, WHOI, <i>ex-officio</i>	
<u>1978</u>		<u>1983</u>	
	Term		Term
R.W. Corell, Ch., UNH	7/76-6/79	R.W. Corell, Ch., UNH	7/76-6/85
J.B. Corliss, OSU	7/77-6/80	R.C. Aller, U. Chicago	7/81-6/84
J.M. Edmond, MIT	7/78-6/81	P.A. Jumars, U/Wash	7/83-6/86
M.C. Gregg, U/Wash	7/76-6/79	D.E. Karig, Cornell	7/80-6/86
D.E. Hayes, L-DGO	7/76-6/79	F.L. Sayles, WHOI	7/81-6/84
K.C. Macdonald, Scripps	7/78-6/81	J. Weissel, L-DGO	7/82-6/85
D.C. Rhoads, Yale	7/78-6/81	M. Wimbush, URI	7/79-6/85
R.C. Turner, Harvard	7/77-6/80	A.A. Yayanos, Scripps	7/81-6/84
A.E. Maxwell, WHOI, <i>ex-officio</i>		G.D. Grice, WHOI, <i>ex-officio</i>	
<u>1979</u>		<u>1984</u>	
	Term		Term
R.W. Corell, Ch., UNH	7/76-6/82	R.W. Corell, Ch., UNH	7/76-6/85
R.N. Anderson, L-DGO	7/79-6/82	J.K. Cochran, SUNY	7/84-6/87
J.B. Corliss, OSU	7/77-6/80	J.W. Deming, Johns Hopkins	7/84-6/87
J.M. Edmond, MIT	7/78-6/81	P.A. Jumars, U/Wash	7/83-6/86
K.C. Macdonald, SIO	7/78-6/81	D.E. Karig, Cornell	7/80-6/86
D.C. Rhoads, Yale	7/78-6/81	G. Thompson, WHOI	7/84-6/87
R.D. Turner, Harvard	7/77-6/80	J. Weissel, L-DGO	7/82-6/85
M. Wimbush, URI	7/79-6/82	M. Wimbush, URI	7/79-6/85
A.E. Maxwell, WHOI, <i>ex-officio</i>		G.D. Grice, WHOI, <i>ex-officio</i>	



UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

ALVIN REVIEW COMMITTEE

AGENDA

8:00 a.m. May 6, 7, 1985

Carriage House, Quissett Campus

Woods Hole Oceanographic Institution

Welcome and Introduction: *Robert W. Corell, Chair*

Review of Proposals for 1986-1987: *Brief summary of pending dive requests recommended at May, and December, 1984 meetings, then Committee discussion and review of new dive requests already summarized and distributed.*

ATLANTIS II/ALVIN Schedule Recommendations for 1986-1987: *The Committee's recommendations will be developed for transmittal to W.H.O.I. operators, funding agencies and the community.*

Comments on ALVIN Program by Funding Agency Representatives: *E. Finkle, NOAA, K. Kaulum, ONR, J. McMillan, NSF*

Report on 1984 ALVIN/ATLANTIS II Season: *I. Barrie Walden and staff will report on ALVIN/ATLANTIS II operations, status, etc. II. Various ARC members will give their impressions of the ALVIN science program.*

Update Report on ALBART: *Status report on program to augment ALVIN support capabilities - Robert Corell.*

Non-Diving Operations Off ATLANTIS II: *Status for 1985-1986, J. Donnelly and J. McMillan.*

Policy on Nighttime Diving: *W.H.O.I. report and discussion.*

Advanced Planning, 1988 and beyond; *The Committee's first look; terms of reference for December, 1985 workshop; Review of 1985 Prospectus -- led by Robert Corell.*

Oversight of ALVIN Program in Recent Years -- A Report to Improve the System: *The funding agencies have asked the ARC to review the ALVIN program (letter in materials supplied the Committee). Terms for the Report will be developed and mechanisms will be established to conduct that review as well as to provide an appropriate degree of scientific oversight in the future. Committee members' discussion of the ALVIN Science Program (above) will be incorporated as appropriate. -- The Committee.*

Policy on Data, Samples and Archiving: *Further development of or recommendations on these policies, perhaps as a part of the report above. -- The Committee.*

Recommendations for New ARC Members: *Corell's, Weissel's and Wimbush's terms expire. Recommendations for new appointments or re-appointments.*

Other Business: *As appropriate and that can be conducted before the hoped-for adjournment of about 1:00 p.m., May 7.*



APPENDIX III

May, 1985

ALVIN SHIPTIME PROPOSALS RECOMMENDED MAY, 1984 AND NOT YET SCHEDULED

INVESTIGATOR	ASSOCIATES	AREA	PURPOSE	SPONSOR	DATE	ALTERNATE	ESCORT*	DIVES	COMMITTEE ACTION
1. Smith, K.L.	Carlucci, A.	Near Honolulu (See I March 1983 detailed request).	Ecological energetics of deep-sea benthic boundary layer (BBL).	NSF	6/85	9/85		14	Recommended for Scheduling
3. Taylor, B.	Fryer, P. Hussong, D. Gill, J. Honza, E. Tamaki, K. Yuasa, M.	Near Yokohama, 31°N, 140°E. <i>Japan</i>	Rifting processes in the Bonin Island Arc.	NSF	Summer 1985	Fall 1985	A/II, ALNAV	12	Recommended for Scheduling
7. Fryer, P.	Gill, J.	21° 35'N, 143° 40'E, near volcanoes in the Mariana Arc, Guam.	Arc volcanism: submarine volcanoes in the Mariana Arc.	NSF	5/1-14	4/85-6/85	Special equip. of Ballard's	6-10	Recommended for Scheduling
14. Thistle, D.	Eckman, J.E.	32° 37.3N, 117° 31.2W	Hydrodynamic and bio- logical effects of persistent biogenic structure on a bathyal haracticoid copepod community	NSF	late 1985, early 1986	1 month separation needed		12 (6 plus 6)	Recommended 12/84
19. Ballard, R.D.		Lofhi Seamount	To test a series of imaging cameras. Test use of remotely operated vehicle from ALVIN	ONR	Feb. 1985	Mar.		7	Recommended for Scheduling
27. Lonsdale, P.	Hawkins, J., et al.	Mariana Back- Arc, Trough	Spreading center processes and products at Mariana Trough Back-arc Basin. Volcanic, tectonic and hydrothermal processes	NSF	When ALVIN there			12	Recommended for Scheduling
31. Craig, H.	Weihsan, J. Kim, Kyung- Ryal	Mariana Trough 18°N, 144°E	Submersible studies of hydrothermal vents and basalts in Mariana Trough	NSF	Jan. - April 1985	Through June 1985		10	Recommended for Scheduling
32. Craig, H.	Various	Lofhi Seamount	Nature of hydrothermal gases	NSF	1985			5 (for SIO Program	Recommended for Scheduling

ALVIN SHIPTIME PROPOSALS RECOMMENDED MAY, 1984 AND NOT YET SCHEDULED

INVESTIGATOR	ASSOCIATES	AREA	PURPOSE	SPONSOR	DATE	ALTERNATE	ESCORT	DIVES	COMMITTEE ACTION
34. Hessler, R.P.		Mariana Trough 18° 10N, 144° 40E	Megafauna of Mariana Trough hydrothermal vents. Composition distribution of vents and adjacent rocky bottoms	NSF	1985			4-7	Recommended for Scheduling
35. Hussong, D.		Mariana Fore- Arc 19° 20N, 146°E,30-147°E	Studies of tectonic features in the northern Mariana fore-arc	NSF	4/85	April- June		14	Recommended for Scheduling
36. Baross, J.		Various hot spots	Incidence, activity, isolation and character- ization of thermophilic bacteria from submarine hydrothermal vents	ONR	1985 1986			1-2 per location	Recommended for Scheduling

May, 1985

ALVIN SHIPTIME PROPOSALS RECEIVED

Page 1

INVESTIGATOR	ASSOCIATES	AREA	PURPOSE	SPONSOR	DATE	ALTERNATE	DIVES	COMMITTEE ACTION
1. Garcia, M.	Craig, H.	Loihi Volcano 155° 16'W, 18° 56'N	History of compositional variation of lavas from Loihi volcano.	NSF.	April-July 1986	7	2	Recommended
2. Karson, J.	Bryan, W. Thompson, G. Mottl, M. Humphris, S. Klinkhammer, G.	MARs. of Kane F.Z. (22° 50- 23° 40'N, 44° 50- 45'W	Variations in crustal processes along MAR axis.	NSF.	April 1986	May 1986	20	Recommended
3. Jannasch, H.	Wirsen, C. Molyneux, S. Cavanaugh, C. Colubic, S.	W. Florida Escarpment 26° 03'N, 84° 56'W	Comparative microbiological studies.	NSF	1986	?	4	Not recommended
4. Thistle, D.	Eckman, J.	W. Basins 32° 52'N, 117° 46'W	Role of biologically produced structure in deep sea community organization.	NSF	Oct., 1986, June, 1987	Need 4 months separation	6+6	Previously recommended
5. Neumann, A.C.	Pauli, C. Martens, C. Chanton, D.	W. Florida Scarp 26°N, 87°W	Pore water, sediment, organisms and rock sampling to study scarp erosion, seep chemistry, diagenesis and zonation.	NSF	June, 1986	Mar.-Oct. 1986	15	Recommended
6. Stakes, D.	Ballard, R. Melson, W. Koski, R.	Mariana Trough Backarc basin	ALVIN-Angus investigation of Trough-Backarc system. Mapping and sample collection.	NSF	Jan., 1987	Dec. 1986, Feb. 1987	17	Recommended
7. Karl, K.	Childress, J. Fanning, K. Winn, C.	W. Florida Escarpment 26° 02'N, 84° 55'W	Biological and geochemical investigations of cold seeps.	NSF	May-June 1986	All but hurricane	10	Not recommended
8. Mullins, H.	Newton, C.	W. Florida Slope and S. Blake Plateau	Origin and evolution of deep water ahermatypic coral reefs.	NSF	1986	1986	6	Not recommended

ALVIN SHIPTIME PROPOSALS RECEIVED (continued)

Page 2

INVESTIGATOR	ASSOCIATES	AREA	PURPOSE	SPONSOR	DATE	ALTERNATE	DIVES	COMMITTEE ACTION
9. Bryan, V.B.	Thompson, G.	EPR Axis 10° 12'N, 104°W	Petrological geochemical and structural variation with axial processes, EPR.	NSF	Spring, 1987	1987	20	Recommended
10. Novelli, A.	Jumars, P. Smith, C.	Santa Catalina Basin 33° 12'N 118° 30W	Organism-sediment-flow interaction studies.	ONR	Begin spring, summer 1986	Late 1986	3*	*in conjunction with P. Jumars/ C. Smith Recommended
11. Jumars, P.	Smith, C.	Santa Catalina Basin	Community effects and biturbation rates associ- ation w. sediment mounds from megafaunal conveyor belt feeders.	NSF	Begin spring summer	Later 1986	12*	*in conjunction with A. Nowell Recommended
12. Curl, H. Normark, W.	PHIL Menlo Park	Juan de Fuca Gorda	Hydrothermal vent modeling and geologic mapping.	NOAA USGS	August	July-Oct.	20	Tabled
13. Sayles, F.	Grassle, J. Sheldon, R. (Knolls Atom.)	38° 25'N, 72° 06'W, DOS-2 18°N, 64°W	Corrosion tests.	DOE	June- Sept. 1986	Any	8	Referred to operators
14. Keating, B.	8 listed	Johnston Island	Geological and biological surveys.	NSF	1986, 1987	Any	16	Not recommended
15. DELETE - SEPARATE REQUESTS LISTED BELOW								
16. Shor, A.	Piper, D. Mayer, L.	Laurentian Fan	Investigate mass wasting and turbidity current generated bedforms.	NSF	Mid 1986	7	8	Recommended
17. Flood, R.	Biscaye, P. Wimbush, M. Hecker, B.	Blake outer ridge, 30° 40'N, 76° 10'W	Studies of abyssal furrows; sampling and physical ocean experiments. Return investigations	NSF	June, July 1986	Spring, Summer, 1986	14	Not recommended

ALVIN SHIPTIME PROPOSALS RECEIVED (continued)

Page 3

INVESTIGATOR	ASSOCIATES	AREA	PURPOSE	SPONSOR	DATE	ALTERNATE	DIVES	COMMITTEE ACTION
18. Brooks, J.		Louisiana Slope 600- 2400 m	Study chemosynthetic marine ecosystems.	ONR NSF	Spring 1986	Any	8	Tabled
19. Schlanger, S.	Campbell, J.F. Premoli-Silva, I	Majuro Island 5° 30'N 172°E	Studies of Harrie Guyot, a drowned atoll and chron. of volcanic edifice building	ONR	Late 1986	1987	8	Not recommended
20. Levin, L. Demaster, D.	Wishner, K. Mullineaux, L.	E. Pacific Seamounts 13°N-102°W and 20°N 109°W	Effects of agglutinating protazoans on faunal community structure.	ONR	Mid '86 Mid '87	?	10 (1986) 8 (1987)	Not Recommended
21. Craig, H. Hey, R. MacDougal, P.	Ballard, R. Fox, P. MacDonald, K.	EPR 13°S to 35°S	Tectonics, geomorphology, NSF petrology and geochemistry of microplates, fracture zones and ridge crests.	NSF	Jan.- Mar. 1988	Dec. 1987	60 (3 legs of 20)	Tabled
22. Childress, J.	Hessler, R. Feibeck, H.	Galapagos Rift	Galapagos Rift biology	NSF	Mid to late 1987		20	Tabled
23. Hammond, S.	Embley, R. Massoth, G.	Juan de Fuca Ridge, Axial	Detailed geological map- ping; OBS experiment; hydrothermal vent fluids studies; and mineralogy and structure of vent chimneys.	NOAA	June- Oct.		20	Tabled
24. Kulm, V. Suess, E. Carson, B.	Moore, C. Lewis, B.	Central Oregon	Subduction processes in heavily sedimented trenches; lithification; fluid venting and structural geology.	NSF	Sumer 1987	Sumer 1986	25	Recommended
25. Lutz, R.A.		Rose Garden, Galapagos Rift 0° 48'N, 86° 13'W	Studies of molluscan shells from deep sea hydrothermal vents.	NSF	Sept.- Oct. 1985	1986 or 1987	2	Referred to Operators (1985 ops.)

ALVIN SHIPTIME PROPOSALS RECEIVED (continued)

Page 4

INVESTIGATOR	ASSOCIATES	AREA	PURPOSE	SPONSOR	DATE	ALTERNATE	DIVES	COMMITTEE ACTION
26. Hawkins, J.	Lonsdale, P. MacDougall, J.	Lau Basin	Studies of axial rift systems.	NSF	Late 1986, 1987	1987	24	Tabled
27. Delaney, J. Johnson, H.	Dymond, J. Lupton, J. McDuff, R.	Juan de Fuca Ridge	Time series measurements of ridge crest processes.	NSF	Summer 1987		40	Tabled
28. Leinen, M.	McDuff, R. Delaney, J.	18° 00'-18° 01'N, 144° 17'-144° 19'E, Marianas	Studies of off-axis hydrothermal field on 3 MY crust west of Mariana Trough spreading center.	NSF	Jan. 1987	Dec. 1986, Feb. 1987	18	Tabled
29. Grassie, J. Gagosian, R. Savles, F. Jannasch, H. Karl, D.	Lutz, R. Martens, C. Manrique, F. Findley, L.	27° 01.5'N, 111° 24'W Guaymas Basin	Biology and chemistry of Guaymas Basin hydrothermal vents.	NSF	Late fall '87 summer 1988		22	Tabled
30. Emerson, S.	Reimers, C.	California Borderlands	Calcium carbonate preservation in deep sea sediments.	NSF	Early, '86, late 1985		4	Tabled
31. Mottl, M.	Von Herzen, R.	Juan de Fuca	Physical and chemical studies in submarine hydrothermal plumes.	NSF	Summer 1986	Summer 1987	12	Recommended
32. Hecker, B.	Hessler, R. Grassie, J. Lutz, R. Turner, R. Wishner, K.	26° 02'N 84° 55'W	Biological investigations of the Florida Escarpment seep community.	NSF	Late 1986	Early 1987	20	Not recommended
33. Ballard, R.		Woods Hole to Azores - Woods Holes	Development and testing.	ONR	1986		48 days	Recommended

ALVIN SHIPTIME PROPOSALS RECEIVED (continued)

INVESTIGATOR	ASSOCIATES	AREA	PURPOSE	SPONSOR	DATE	ALTERNATE	DIVES	COMMITTEE ACTION
34. Carney, R.S.	Knauer, G.	Central California Coast	Determination of relationship between spatial heterogeneity of recently deposited detrital material and distribution of megafaunal detritus feeders in deep sea.	NSF	Feb. 1986, Aug. 1987	Mar.-June	12	Recommended
35. Keating, G.	Grigg, R. Chave, K. Taylor, G. others	18° 45'N, 158° 20'W	Environmental studies of Mn crust mining sites on Cross Seamount.	NSF	Any	Any	19	Not Recommended
15A. Grassle, J. Whitlatch, R.	Aller, R. Honjo, S.	5° 20'N, 86° 56'W	Animal sediment relationship in the deep sea.	NSF	Fall 1986		10	Not Recommended
15B. Aller, R.	Honjo, S. Grassle, J.	5° 20.5'N, 81° 55.4'W	Animal sediment interactions on geochemical processes near sediment water interface.	NSF	Fall 1986, spring 1987	1988	2	Recommended
15C. Honjo, S.	Cole, J. Grassle, J. Aller, R.	5° 20'N, 81° 56'W Panama Basin	The fate of biogenic particulate matter at the deep-sea floor.	NSF	Fall 1986	Spring 1986	6	Recommended
36. Stubblefield, W.	Stanley, D. McGregor, B.	38 N, 73 , 40'W Wilmington Canyon	Dynamic canyon processes	NOAA	Summer 1986		15	Recommended
37. Turner, R.		DOS-2	Studies on corrosion	ONR	Fall 1986	Summer 1986	2-3	Recommended

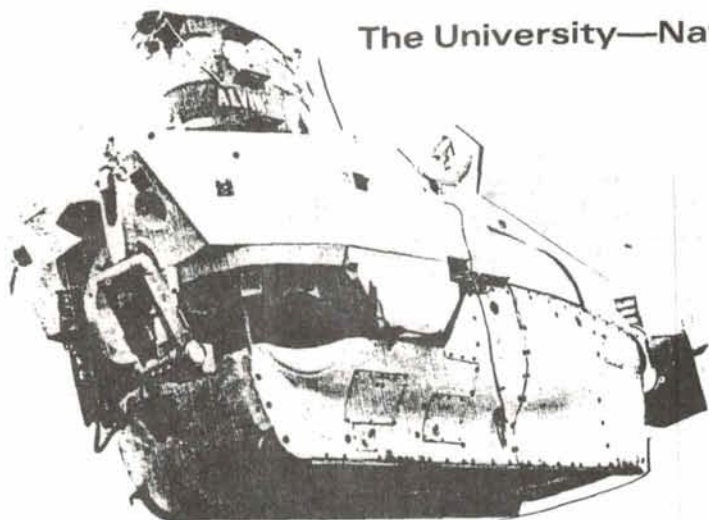
The University—National Oceanographic Laboratory System

Opportunities for

Oceanographic Research

DSRV ALVIN

at the

Woods Hole Oceanographic
Institution**1986/1987****The Deep Submergence Research Vehicle ALVIN**

The Deep Submergence Research Vehicle ALVIN, based at the Woods Hole Oceanographic Institution, is designated a UNOLS 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. Operations are supported under a Memorandum of Understanding among the National Science Foundation, the National Oceanic and Atmospheric Administration and the Office of Naval Research.

Planning and Scheduling for ALVIN

The UNOLS ALVIN Review Committee (ARC) makes recommendations for ALVIN-ATLANTIS II areas of operation two and three years in advance and makes schedule recommendations generally one year in advance of the operating year. Over the last several years the task of matching dives available on ALVIN with requests from skilled individual investigators has become critical and requires careful advanced planning.

As one basis for advanced planning the ARC conducts annual workshops (December, 1984 for this planning cycle) to solicit interest in using ALVIN two, three and more years into the future. (See the November 1, 1984 letter and announcement from Robert Corell to the ALVIN community.) On the basis of these workshops and Notices of Intent, the ALVIN Review Committee will, early each year issue a *PROSPECTUS* outlining interest in and the ARC's recommended tentative plans for ALVIN two and three years in advance (i.e., the 1985 *PROSPECTUS* will recommend broad areas of operation for 1987 and 1988).

Through this *Opportunities for Oceanographic Research*, DSRV ALVIN the ARC solicits requests for ALVIN dives, to be reviewed by the Committee in May, 1985. On the basis of that review, the ARC will make 1986 and 1987 schedule recommendations to the three funding agencies and to the W.H.O.I. operators.

Recent and Scheduled Operations

The 1984 ALVIN diving program was the first using ATLANTIS II as the support ship, and was perhaps the most successful in history. More than 175 dives were conducted in the western Atlantic and in the eastern Pacific from the East Pacific Rise to the Gorda-Juan de Fuca Ridge. At their May, 1984 review, the ARC recommended an extensive program

of more than 250 dives through the eastern and western Pacific, to be conducted in 1985 and early 1986. These recommendations proved too ambitious, and later recommendations were to operate only in the eastern Pacific in areas from the California Basins to the Galapagos and then return to Woods Hole in Fall, 1985. This will allow inspection of the ATLANTIS II and critical maintenance and upgrading of ALVIN prior to an extended deep dive expedition such as that to the western Pacific. ALVIN will be in overhaul until summer, 1986.

Requests for 1986 and 1987

The ALVIN Review Committee recommends the following program for mid 1986 through 1987: After ALVIN overhaul, conduct a modest deep diving program in the Atlantic in mid 1986 followed by an expanded diving program in both eastern and western Pacific in late 1986 and much of 1987. (The program for 1988 is open.)

The ARC invites ALVIN Time Requests for both 1986 and 1987 for investigations in the Atlantic and throughout the Pacific. Those Time Requests recommended in May, 1984 but not now scheduled will remain as recommended Requests. Investigators may, however, wish to submit updated research plans or funding information.

ALVIN Time Requests through UNOLS are for use of the facility only and no research or travel funding is implied. Associated research proposals should be submitted in a timely fashion through usual channels to granting agencies.

Time Requests will be reviewed by the ARC at their May, 1985 meeting to recommend projects. Criteria for the review include scientific merit and suitability for ALVIN/ATLANTIS II. The Committee will make schedule recommendations based on remaining Requests recommended in May, 1984 together with newly submitted Requests recommended in May, 1985.

Principal investigators are expected to meet pre- and post-cruise obligations that may exist for operations within jurisdiction of foreign states.

Requests for 1986 and 1987 must be received in the UNOLS Office by April 1, 1985. Requests should include the Request form or a copy together with the additional information on the intended investigation as requested in this announcement. Failure to meet the submission deadline will jeopardize consideration of the Time Request.

A review anticipated for Spring, 1986 will provide a second opportunity to submit Time Requests for 1987.

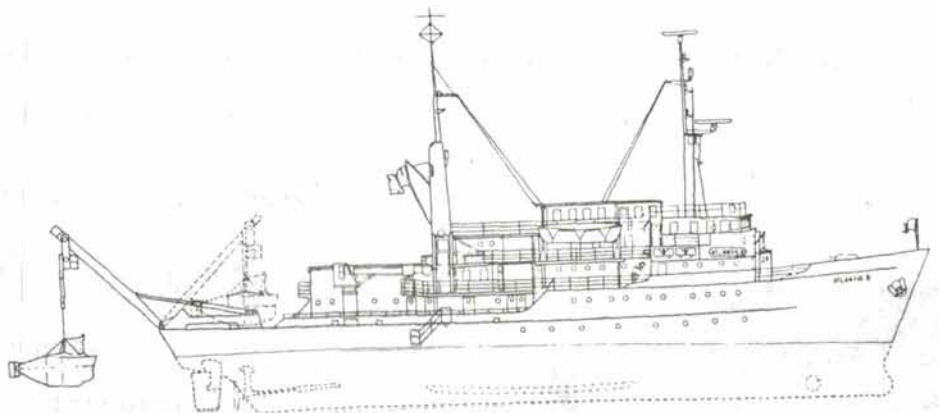
To obtain further information regarding ALVIN/ATLANTIS II system capabilities, specialized equipment or the provision of escort services, contact:

Barrie B. Walden, Submersible Program Manager
Woods Hole Oceanographic Institution
Woods Hole, MA 02543
Telephone: (617) 548-1400, Ext. 2407

Proposal submissions should be addressed to:

Chairman, ALVIN Review Committee
UNOLS Office, WB-15
School of Oceanography
University of Washington
Seattle, Washington 98195
Telephone: (206) 543-2203

R/V ATLANTIS II:



DESCRIPTION OF DSRV ALVIN

Length: 7.6 meters (25 feet)
 Beam: 2.4 meters (8 feet)
 Draft: 2.1 meters (7 feet) surfaced
 Full Speed: 1 1/2 knot
 Cruising Speed: 1 knot
 Cruising Range: 5 miles submerged
 Displacement: 18 tons
 Endurance: 72 hours
 Normal Dive Duration: 6-10 hours
 Depth Capacity: 4,000 meters (13,120 feet)
 Complement: 1 pilot, 2 scientific observers

Propulsion: Large stern propeller, 2 small side lift propellers which can be rotated and separately reversed.

Ownership: The submersible ALVIN is a Navy-owned national oceanographic facility jointly supported by the National Science Foundation, the Office of Naval Research and the National Oceanic and Atmospheric Administration and operated by the Woods Hole Oceanographic Institution.

Navigation: Gyro compass and gyro repeater; magnetic compass; nose mounted horizontal scanning sonar system; indicators for depth, speed, list, trim and variable ballast; echo sounder; battery voltmeters, ammeters and ground detector; five viewpoints.

Electrical Power: Three banks of lead-acid batteries, 60 and 30 volt DC systems, 40.5 KWH total. Limited amount of 115 volt 60 cycle AC power.

Communication: Sonar telephone (voice or code); marine band (VHF) radio.

Other Features: The submersible is designed to be versatile with respect to the weight, space and power requirements of portable scientific equipment in order to meet the differing needs of scientists using the vehicle. Scientific equipment which remains on board most of the time includes two remotely controlled mechanical arms and associated strobe and incandescent lights, closed circuit video system with recorder, water temperature monitor, current speed and precisions depth indicator.

A precision navigation system is also available which will allow accurate positioning of the submersible at any time during a dive series. This system and other specialized equipment such as hard rock samplers, magnetometer, precision temperature sensors and analog or digital data logging equipment are available for use with ALVIN, but may require some additional funding for installation and operation.

DESCRIPTION OF R/V ATLANTIS II

Built: 1963	Length: 210 feet LOA (64 meters)
Beam 44 feet (13 meters)	Draft: 16 feet (5 meters)
Gross Tonnage: 1,529 tons	Displ.: 2,300 L tons
Crew: 25	Scientific Personnel: 10 ALVIN support team plus 15 scientists

Main Engines: Two GM 12-567E diesel engines driving through reduction gears with variable speed, hydraulic clutches. 2,000 shp.

Bow Thruster: 750 hp trainable. DC motor driving from main gear PTO.

Ships Service Generators: Two 480/120 volt AC 300-KW generators driven by CAT 353 diesel engines.

Propellers: Twin screw: 3 fixed blade; bronze.

Ownership: Built under grant from NSF. Conditional title rests with W.H.O.I.

Speed: Cruising: 11.5 knots
 Full: 13.5 knots
 Minimum: Dead Slow

Endurance: 45 days Fuel Capacity: 90,000 gallons
 Range: 9,000 miles

Laboratories: wet - 400 square feet
 dry (4) - 3,500 square feet plus 28' by 13' ALVIN hanger

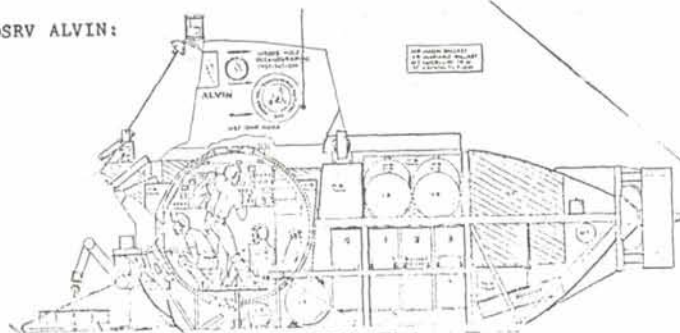
Sewage System: Two type III holding tanks;
 Five to ten days endurance.

Ship is equipped for full range of oceanographic observations and work. One trawl winch: 30,000 feet 1/2" cable. One CTD winch 27,000 feet 0.303" cable or 30,000 feet 3/16" wire.

One marine crane: 20 ton capacity.

One hydraulic powered A-frame: 18 ton capacity for launch and recovery of ALVIN

DSRV ALVIN:



SUBMISSION OF ALVIN TIME REQUESTS

Requests for use of DSRV ALVIN should be initiated by sending a completed time request form (copy overleaf) to: Chairman, ALVIN Review Committee, c/o UNOLS Office, WB-15, School of Oceanography, University of Washington, Seattle, WA 98195. Requests may be made by scientists and engineers at any university or research institution in the United States, and should be supported by a research proposal (preferred length: 4-8 pages, single-spaced for items 1 to 6) which specifically addresses each of the following:

1. The nature and significance of the proposed research;
2. The scientific questions being asked and the approaches that would be used toward their resolution;
3. Justification of the need for ALVIN for this work;
4. The research site(s) and its justification;
5. Number of dives required, justification for the number of dives and any seasonal considerations;
6. Likely requirements for future ALVIN dives (not requested here) for completion of the research;
7. Proposed number of scientists and engineers in the party;
8. Curricula vitae of principal participants;
9. Potential or current support for the proposed research effort;
10. List of publications resulting from any previous ALVIN work;
11. Any special engineering required for dive operations.

- NOTE: 1) If operations are to be carried out in foreign waters, the required clearances should be requested as early as possible. Collaboration with foreign scientists is encouraged.
- 2) If the program is not already funded, a comprehensive proposal must be submitted by the investigator to his sponsoring agency in the conventional way. The ALVIN Review Committee will submit recommendations for consideration by the research sponsor. Final scheduling depends on approval by both the ALVIN Review Committee and the funding agency.

ALVIN Review Committee:

R.W. Corell, University of New Hampshire, Chairman
 J.K. Cochran, State University of New York, Stony Brook
 J.W. Deming, Johns Hopkins University
 P.A. Jumars, University of Washington
 D.E. Karig, Cornell University
 G. Thompson, Woods Hole Oceanographic Institution
 J.W. Weissel, Lamont-Doherty Geological Observatory
 M. Wimbush, University of Rhode Island
 G.D. Grice, Woods Hole Oceanographic Institution, *ex-officio*

UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

DEEP SUBMERGENCE RESEARCH VEHICLE ALVIN

TIME REQUEST

TO: Chairman, ALVIN Review Committee
 UNOLS Office, WB-15
 School of Oceanography
 University of Washington
 Seattle, WA 98195

DATE: _____

USE OF THE ALVIN SUBMERSIBLE RESEARCH SYSTEM IS REQUESTED FOR _____ YEAR AS FOLLOWS:

PURPOSE (Project title and brief outline of program) _____

PRINCIPAL INVESTIGATOR (Name, Title, Address, Tel. No.) _____ OTHER INVESTIGATORS INVOLVED _____

PROPOSED CHIEF SCIENTIST _____ TOTAL NUMBER OF SHIPBOARD PERSONNEL _____

PROJECT REQUIREMENTS

NO. OF DIVES REQUESTED _____ PREFERRED DATES _____ ALTERNATE _____

AREA OF OPERATIONS: LAT. & LONG. (Attach page size chart showing location of dives & bathymetry)

NAME OF NEAREST PORT _____ DISTANCE _____ NAUT. MI _____

ATTACH BRIEF DESCRIPTION OF PROPOSED ESCORT/SURFACE SUPPORT SHIP IF ONE IS REQUIRED. LIST SPECIAL EQUIPMENT REQUIREMENTS (E.G., SENSING, SAMPLING AND NAVIGATION REQUIREMENTS).

Escort requirements are available from ALVIN Operations Manager

FUNDING STATUS

FUNDED	NOT-FUNDED
FUNDING AGENCY _____	PROPOSAL SUBMITTED: _____ TO: _____
GRANT NO: _____	WILL BE SUBMITTED: _____
AMOUNT OR ANNUAL RATE BEGIN DATE DURATION _____	DATE: _____ AMOUNT REQUESTED: _____
	NEW ----- or RENEWAL OF PROPOSAL ----- GRANT NO: _____

ATTACH RESEARCH PROPOSAL OR PRELIMINARY PROPOSAL ADDRESSING POINTS LISTED ON OVERLEAF

SUBMITTED BY _____
 SIGNATURE

APPROVED _____
 DEPARTMENT CHAIRMAN
 or
 LABORATORY DIRECTOR

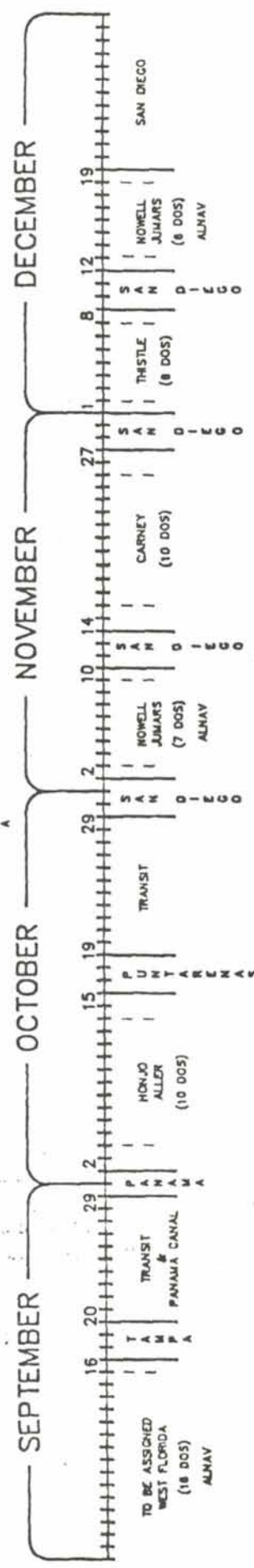
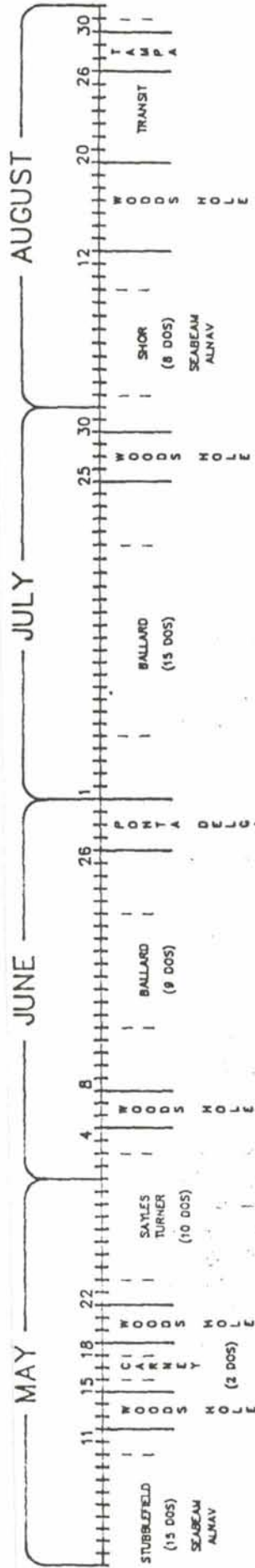
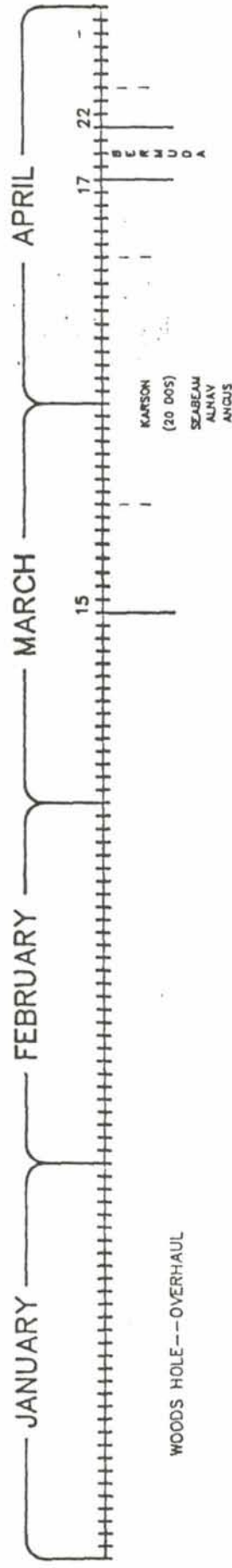
TITLE, ADDRESS & TELEPHONE NO. IF DIFFERENT FROM PRINCIPAL INVESTIGATOR

TENTATIVE*

ALVIN OPERATIONS

19 JUNE 1985

1986



* Based upon requests for ALVIN time received by the UNCLS ALVIN REVIEW COMMITTEE and therefore subject to revisions resulting from supporting agency funding decisions.

NATIONAL SCIENCE FOUNDATION
WASHINGTON, D.C. 20550

DIVISION OF OCEAN SCIENCES
OCEANOGRAPHIC CENTERS AND FACILITIES SECTIONS

12 March 1985

Dr. Robert W. Corell
Chairman, ALVIN Review Committee
New Hampshire Sea Grant Program
University of New Hampshire
Durham, N.H. 03824

Dear Bob:

Now that ALVIN has completed a year of operations from ATLANTIS II and we recognize that there are some limitations that must be considered in the scheduling process, the funding agencies agree that a formal review of the ALVIN program is due. This review should be conducted by the ALVIN Review Committee (ARC). At a minimum, it should include an examination of the scheduling process, technician support requirements, SEABEAM utilization, long range planning for extended voyages, and the advisability of limits on operating days per year. If there are other aspects of the operation of ALVIN that the ARC or ALVIN Group feel warrant attention, we will welcome your recommendations on these subjects as well.

A second area of concern that must be addressed is the proper curation and distribution of samples obtained with ALVIN. As you recall, in 1979 interim procedures for curation were established but were given a life span of only one year. These were never renewed. We suggest that the ARC establish an ad hoc subcommittee of perhaps 3 or 4 members to address this problem and submit recommended procedures to UNOLS on how to ensure the future availability of samples and data to the scientific community at-large.

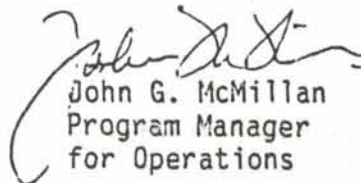
We would like you to communicate to the ARC our concerns on these subjects and begin the review process as soon as practicable. Perhaps the ARC May meeting will serve as an appropriate occasion to prepare a draft report. We have alerted the ALVIN Group to be prepared to respond to any questions the ARC may have on operational considerations.

Dr. Robert W. Corell

2

Both NOAA and ONR concur with this need for a formal review. In view of the schedule changes that recent arose out of operational necessity, and the resultant communication problems and criticism, we feel there is some urgency in letting the ALVIN user community know that we are aware of the problems and are collectively addressing them.

Sincerely yours,



John G. McMillan
Program Manager
for Operations

cc: E. Finkle
K. Kaulum
G. Grice
B. Walden
W. Barbee

ALVIN DIVE SUMMARY - 1964-1984

1502 Total Dives

Average # of Dives	71.5
1984	174
Average Depth	5419 Feet
1984	7499 Feet
Average Duration	6 Hours
1984	7.5 Hours
Percent for Science	85 %
1984	99 %
Percent for Engineering and Training	13.5 %
1984	.5 %

ATLANTIS II OPERATIONS:

1984 318 Operating Days
 266 Days at Sea
 194 Days on Station
 174 Dives Completed

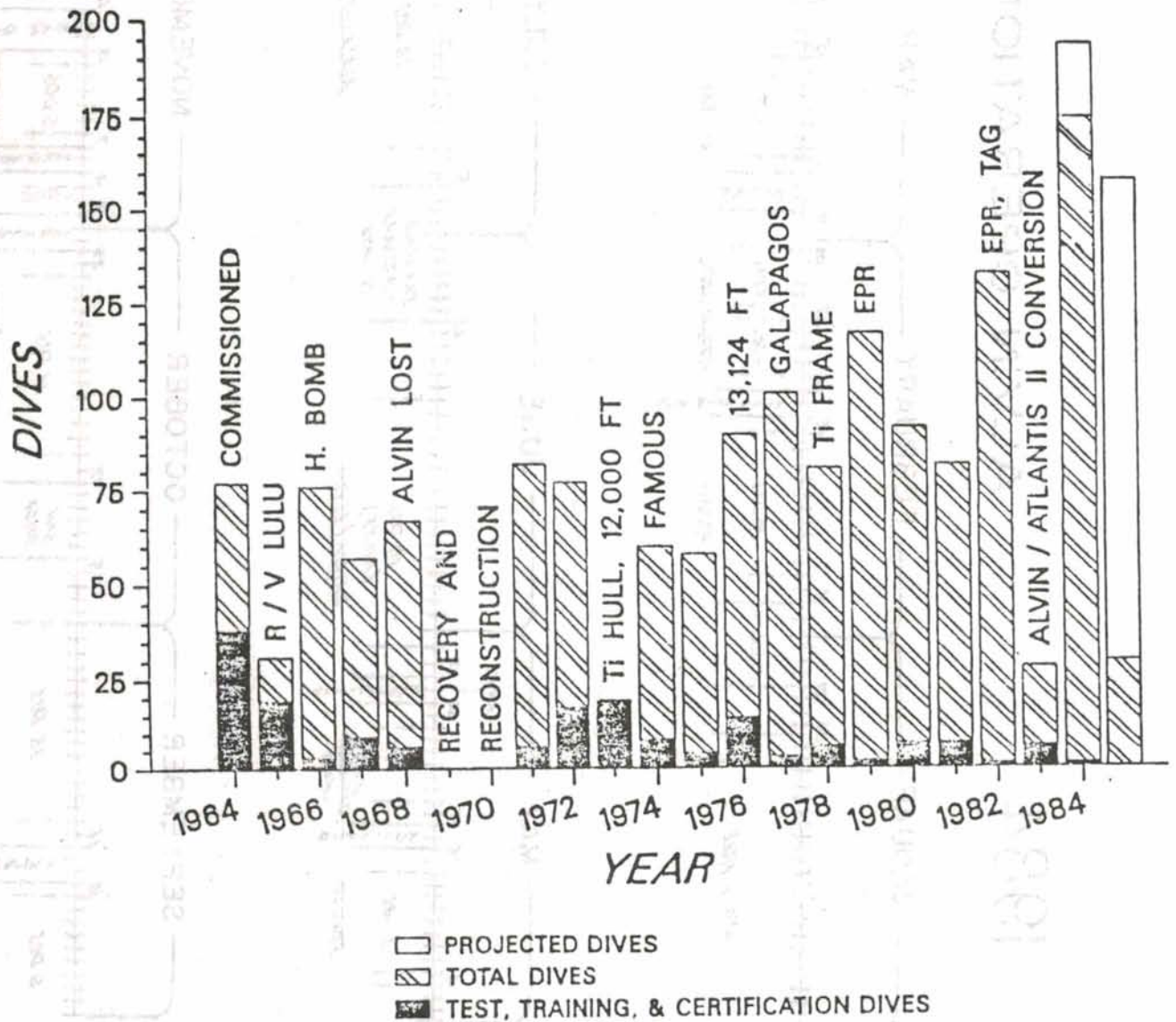
1985 250 Operating Days
 207 Days at Sea
 157 Days on Station

Dives scheduled to date 30

Dives completed to date 29

Major Overhaul November 85 - March 86

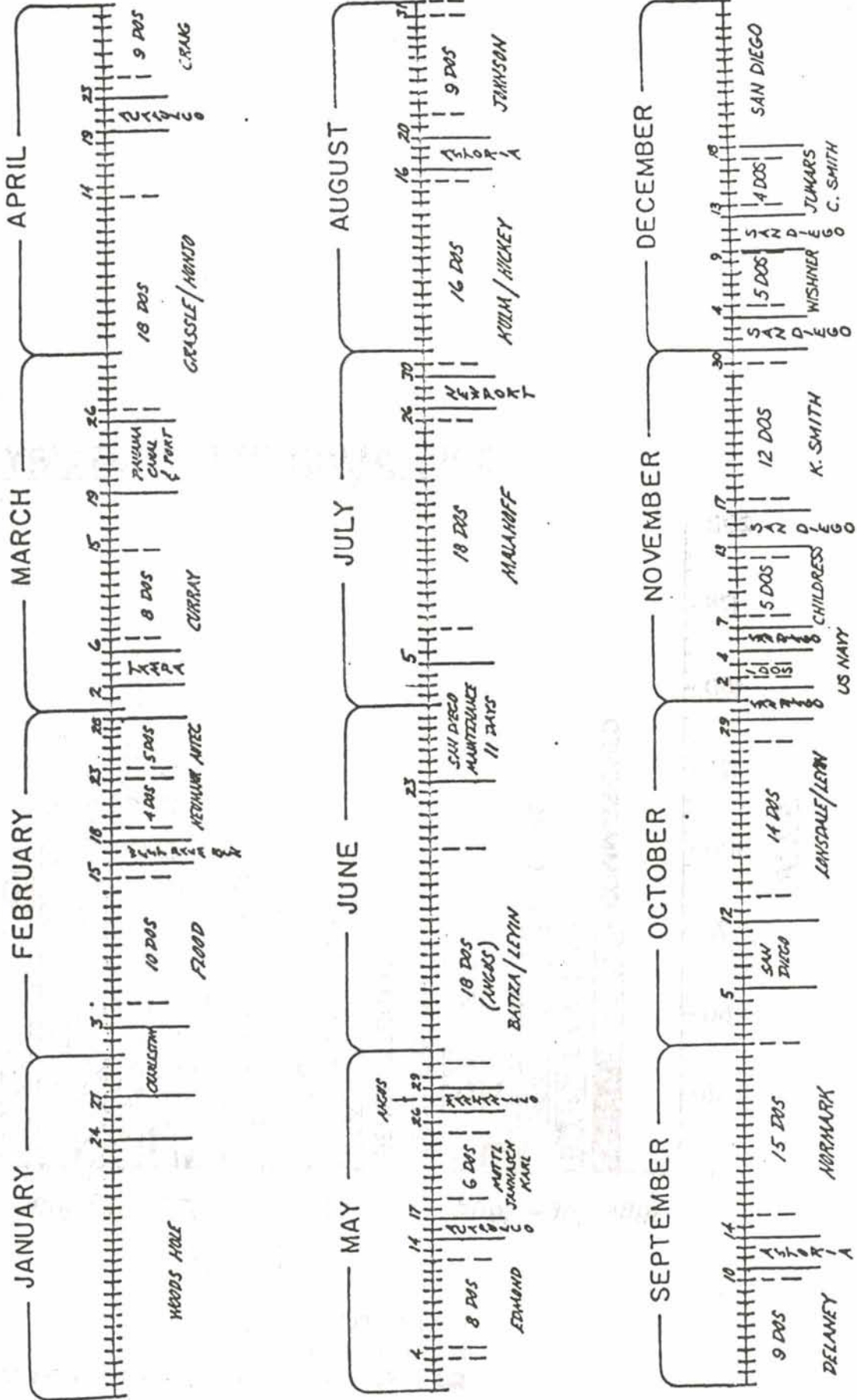
D8V ALVIN DIVE HISTORY



1984

ALVIN OPERATIONS

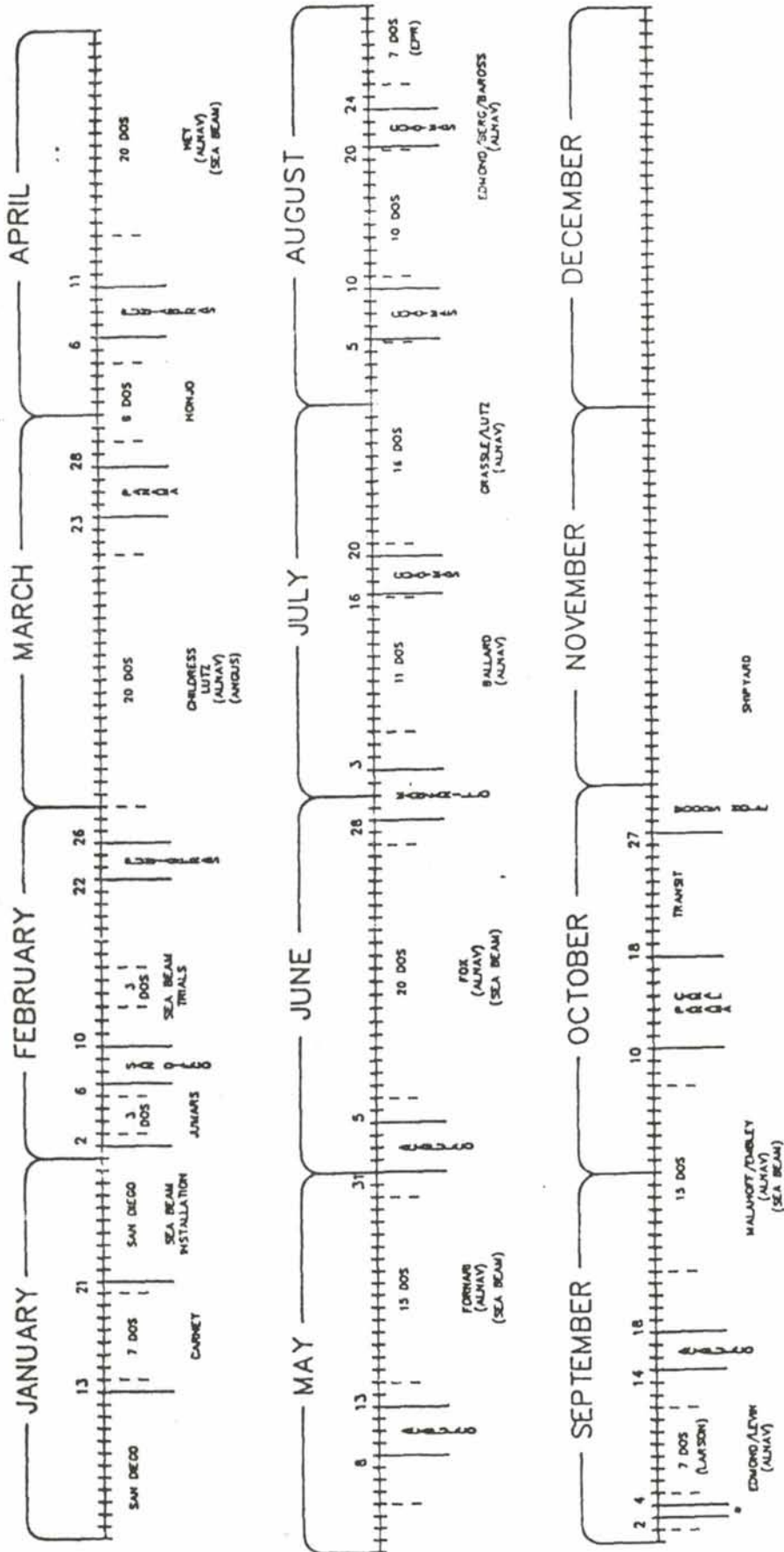
MAY 7-1983
 JUNE 18-1984
 JULY 22-1983
 AUG 1-1984
 SEPT 24-1984



ATLANTIS II / ALVIN OPERATIONS

1985

-NOV-9-1984-
 JAN 23, 1985 -DEC-30-1984-
 -JAN-8-1985- -DEC-31-1984-
 -DEC-30-1984- -JAN-15-1985-



* SAN LUCAS -
 PORT STOP FOR
 EXCHANGE OF SCIENCE PARTY.
 DATES TO BE DETERMINED
 BY CHIEF SCIENTIST.

May 7, 1985

Rules for Review of ALVIN Dive Requests
ALVIN Review Committee

1. Requests for ALVIN dives, having been solicited by the ALVIN Flyer will be reviewed annually, and principally at the ARC meeting held for that purpose in about May.
2. Extraordinary requests (e.g., those for which a later submission is warranted, or those for which ARC recommendations and funding decisions do not agree) will be reviewed at ad hoc meetings either by telephone or opportunistic assembly. The Committee discourages late submissions.
3. There is potential for conflict of interest on any dive request originating at a Committee member's institution or if any investigator listed on the request is from a member's institution.
4. The Chair will raise the question of conflict of interest at the beginning of consideration on each request for dives. Notes for the meeting will reflect these queries and actions of the member(s) involved.
5. If a Committee member is listed on a request (or is, in fact, actively involved) that member will be excused from the room for all discussion, consideration and voting on that request.
6. For requests originating at Committee member(s)' institutions, or with investigators from their institutions, those Committee members so connected will be excused from the room for all discussion, consideration and voting on that request except that at the invitation of the balance of the Committee (and with that member's concurrence) members connected only by institutional affiliation may comment on requests. However, in no case will those members vote on the request in question.
7. If there remains a question concerning conflict of interest concerning any member(s) for an individual request for dives, it will be decided by vote of the balance of the Review Committee.
8. Voting Committee members will vote to rank individual requests for dives as:
 - 1, outstanding
 - 2, excellent
 - 3, fair
 - 4, poorest ranking
 - 5, tabled--not ranked



