

ALVIN REVIEW COMMITTEE

Summary Report
of the
June 20, 21, 22, 1988 Meeting

Carriage House
Woods Hole Oceanographic Institution
Woods Hole, MA

Minutes of the Meeting

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ALVIN REVIEW COMMITTEE

Minutes of Meeting

June 20, 21, 22, 1988

Carriage House

Woods Hole Oceanographic Institution

Woods Hole, MA

The meeting was opened at 8:00 a.m. by Feenan Jennings, Chair. Committee members, funding agency representatives from NOAA, NSF and ONR, W.H.O.I. operator representatives, agenda participants and UNOLS staff present for all or part of the meeting:

ALVIN Review Committee

Feenan Jennings, Chair
James Eckman
Jeff Fox*
George Grice, ex-officio
Doug Nelson
William B.F. Ryan
Mary Scranton
Geoffrey Thompson
Georges Weatherly
* Substitute pre-arranged

UNOLS Office

William Barbee

Agency Representatives

David Duane, NOAA
Neil Anderson, NSF
John Calder, NSF
Bruce Malfait, NSF
Keith Kaulum, ONR

Participants

Bruce Robison (ALVIN science study)
Hugh Ducklow (JGOFS)
Hugh Livingston (JGOFS)
James McCarthy (JGOFS)

W.H.O.I. Operators

Barbara Martineau
Don Moller
Barrie Walden

The ALVIN Review Committee roster is Appendix I.

George Grice welcomed the Committee on behalf of Woods Hole Oceanographic Institution. He noted other events occurring during the week, and provided information on arrangements.

Dr. Grice briefed the Committee on the recent seizing of ATLANTIS II, and subsequent events. The ATLANTIS II was seized as a part of the U.S. Coast Guard/Customs zero tolerance policy. The basis of seizure was finding minute quantities of drugs in the personal effects of a single crewman. The ATLANTIS II remains in Customs custody, allowed to operate under a Constructive Seizure Agreement. Such an agreement was reached (in part) because W.H.O.I. has set and enforces a clear, unequivocal policy prohibiting drugs, could credibly posture themselves as innocent

victims, and have been forthright and cooperative. Woods Hole has and will spend a great deal of energy seeking release of the ship. Fortunately, because an extended in-port time had been scheduled for San Diego and because work was allowed on board, ATLANTIS II/ALVIN were able to leave port on time, as on the 1988 ALVIN schedule.

The Agenda (Appendix II) was reviewed. Items are reported in the modified order in which they were addressed.

Barrie Walden, W.H.O.I., reported on the 1987 ALVIN/ATLANTIS II season, and the status of 1988 operations.

Operations were very successful in 1987, with 165 ALVIN dives. Only 5 dives were lost from the schedule: 4 due to weather and 1 for a personal problem. None were lost due to mechanical problems with ALVIN. Both major deployments, to the Western Pacific April through August and Gorda-Juan de Fuca, August-October, were highly successful. According to 1987 user assessments, operational statistics and performance records ALVIN was highly improved during the 1986 overhaul. Both performance of the submersible and accessories (manipulator, data logging, cameras, etc.) have been improved. A number of problems continue, however. The new manipulator, while now working as designed, has idiosyncrasies. It is much more demanding on pilots than the earlier manipulator. Some improvements are being made.

Improvements have been made on data systems, and the ALVIN Group now includes data systems specialists. The system is not presently adequate for all projects.

Cameras and video systems are being generally upgraded, and continuing improvement is expected.

A new sonar system that can be used in a swath mode is being acquired.

Plans were to switch to different (new) batteries which would have provided more power and increased operation between maintenance periods. However, the new vendor did not deliver.

Problems continue concerning ALVIN navigation. Although the present system can and does provide accurate, precise location, it does not integrate well with the ship, and provides poor documentation display and records to the user. Vendors have been canvassed in search of better systems, but nothing satisfactory has been found so far.

Personnel is the biggest problem facing the ALVIN Group. The right mix of technical and operational capabilities has not been found. Turnover has been too high. There are only

two expedition leaders in the ALVIN Group. Various solutions are being tried, but all of the problems are not yet solved.

In 1988, through June, only two scheduled dives had been missed, both due to weather. Almost 200 dives are scheduled for 1988. Although many of the problems noted in 1987 continue, some progress has been made on most of them.

It has been necessary to change vendors for batteries. The old batteries were used through May (because replacements were not available). Improvements have been made to battery boxes; they had been leaking.

Video systems have not been fully satisfactory. Data overlays are of poor quality. More work is needed.

The ALVIN Group now has a Microvox for their communications management, data systems, etc. They are using UNIX. With the system ALVIN/ATLANTIS II enjoys more systematic communications, systematic satellite position logging, etc.

Several ARC members discussed with Barrie Walden various technological problems and potential solutions. A buoy on a tether 20 meters above ALVIN might improve navigation. In response to questions on whether or not technologically feasible but expensive navigation improvements were worthwhile Mr. Walden reported from a canvass of users that 75-80% of all ALVIN projects would be improved by better bottom navigation and improved navigation is essential to 25% of current projects. Further, ALVIN's new propulsion system provides capability for surveys of the bottom if improved navigation is also provided. (I.E., New sonar could survey 30 meter-wide swaths.)

David Duane, NOAA asked about safety vehicle developments. Mr. Walden reported that aside from the towed wings/snag system now operational there is little credible development concerning rescue (at least in great depths). Recent efforts by the French do not appear to be productive. Aside from the Navy's ROV deployment capability little deep recovery capability exists.

The manipulator arm now in use has been upgraded many times to make it more useful and less taxing to use. It still suffers from reliability problems. The Navy's TURTLE has been equipped with a force-feedback arm that is excellent.

A new CTD and a new-design magnetometer are being acquired for ALVIN.

Mr. Walden alerted the Review Committee to impending problems with ALVIN data archives. There is not and has never been a modern, systematic archiving scheme for ALVIN

data and information. The volume of data is growing to a scale almost unmanageable without a systematic scheme. Because of inadequate cataloging, filing, etc., systematic data search and recovery are nearly impossible. Another problem is that early ALVIN data and information are deteriorating. Much of this early record is on film, and material 15 years or older is beginning to fail. (That is, records from FAMOUS are about to be lost.)

It is clear that two efforts are needed: to construct an electronic data base that will make it possible to manage both historic and current ALVIN data and information. The second is to examine, assess and selectively reproduce some old records. Mr. Walden provided a paper outlining several options for pursuing both efforts.

The ALVIN Review Committee discussed aspects of the archiving problem, and agreed that the ALVIN record would be widely used if it were machine searchable in a random access mode. They also agreed that the historical record should be assessed and selected portions reproduced.

The ALVIN Review Committee recommended that Barrie Walden lead a W.H.O.I. effort to develop for ALVIN records an appropriate cataloging/archiving system with provisions for rapid random access search. They further recommended that the historical record be assessed for selective reproduction.

The ARC heard a report from Bruce Robison who is chairing a committee to assess for UNOLS submersible science systems needs for the 1990's (and beyond). Committee members are:

Bruce Robison, Chair	Dan Fornari, L-DGO
Bob Aller, SUNY, Stony Brook	Bob Wall, U. Maine
Dick Cooper, U. Connecticut	Karen Wishner, Rhode Island
Joe Curray, Scripps	Dana Yoerger, WHOI

The study initiated in August, 1987, is addressing five objectives:

1. Assess and project trends in that ocean science supported by submersible systems.
2. Review and recommend submersible systems to meet those trends.
3. Recommend funding plans.
4. Recommend implementation plans.
5. Recommend a federal strategy for submersible science.

In addressing the five objects, four general categories of submersibles and facilities are being considered: ALVIN, deeper (at least 6000 m) capability, shallow water capability and overall technological development.

Preliminary conclusions are forecast of a growing demand for a much broader variety of submersible technology than is now available to the ocean science community, and that in situ capabilities, including submersible capabilities, will supplant satellites/remote sensing as the greatest facilities demands in ocean science. Recommendations are also being developed concerning submersible systems management that would apply to federal agencies and to UNOLS.

The report will be complete by October, 1988.

The ALVIN Review Committee has received a request for R/V ATLANTIS II shiptime to support the Joint Global Ocean Flux Study (JGOFS) U.S. Global Ocean Flux Study (GOFS) during 1989. NSF representatives had requested that the ARC review this non-ALVIN use of the ATLANTIS II, and make recommendations in context with their 1989 ALVIN/ATLANTIS II schedule recommendations. The ARC agreed.

Hugh W. Ducklow, James J. McCarthy and Hugh Livingston presented the JGOFS/GOFS request. Their request was for use of the ATLANTIS II for about March through mid June. The ATLANTIS II was requested because it can accommodate the large scientific party and because only minor enhancements to ships outfitting would be needed (sail system, better conducting cable winch, sea water system). Since this request was initiated (see 4. Brewer, P., on Summary of ALVIN Shiptime Requests) JGOFS plans have been refined and the request has been reduced to the level essential for reasonable program progress. The ARC recommendation on this request was made in conjunction with recommendations for 1989 ALVIN dive requests.

Review of Dive Requests for 1989. Dive requests for 1989 and reviewed at the June, 1988 meeting are listed by region in Appendix III and summarized in Appendix IV. Requests had been submitted in response to UNOLS announcement **Opportunities for Oceanographic Research DSV ALVIN, 1989** (Appendix V). Twenty-three requests were received for a total of 240 dives (14 in 1988, 226 in 1989). Requests were investigations in the north Atlantic, East Pacific Rise, both north and south latitudes, off the California Coast, Gorda-Juan de Fuca system and in the western Pacific. For each dive request funding agency representatives provided information on the status of science proposals. The Committee reviewed all dive requests individually, in accordance with their Rules for Review (Appendix V). The non-ALVIN request for ATLANTIS II was also considered.

The ARC recommended three requests for fourteen dives for scheduling in 1988 and nine requests for 74 dives to be scheduled in 1989. The Committee also recommended that ATLANTIS II be scheduled in support of GOFS March-June during most of which ALVIN will be in overhaul. Two dive requests were withdrawn, six were tabled without review and two were not recommended.

In making recommendations for scheduling the ARC followed their policy of limiting favorable reviews to those requests that could be accommodated in the 1989 schedule. There will be no queue of already-recommended dive requests pending in 1990. The ARC directed that potential investigators be informed promptly of individual ARC recommendations.

Schedule Recommendations for 1989. A provisional schedule for 1989 was outlined to include all of the dive requests recommended as well as the non-ALVIN use of ATLANTIS II. The provisional schedule would deploy ATLANTIS II on JGOFS March through June, refit for ALVIN together with ALVIN trials and certification July. ALVIN operations would begin August 1 on the Mid Atlantic Ridge, then north Atlantic continental margins in September. After transit to the Pacific via Panama, investigations would be conducted on the southern East Pacific Rise in October-November and on the northern EPR through December. ALVIN/ATLANTIS II would end in 1989 in San Diego, with ATLANTIS II ready to enter shipyard for maintenance and inspection. Because many of the science funding decisions underlying this schedule were still pending, publication of a 1989 schedule was deferred. An operational schedule for 1988, reflecting additional ARC recommendations is Appendix VII.

The provisional schedule for 1989 was discussed with representatives from the tri-partite signatory agencies, NOAA, NSF and ONR. Bruce Malfait, NSF, expressed agency concern that a more substantive Atlantic program was not requested. He also noted that funding decisions had not been reached on most of the scheduled NSF projects. David Duane, NOAA said that NOAA's 1989 program imperative was that a Mid-Atlantic Ridge project be done. Keith Kaulum, ONR, noted that no ONR-sponsored work was submitted or is included in the schedule. Should ONR-sponsored ALVIN work arise later ONR will submit it. This lack of activity by ONR-sponsored programs was of concern to the ARC to WHOI operators and to UNOLS-community users as well as to ONR.

Mr. Kaulum also expressed concern over the apparent inadequacy of available systems for ALVIN on-the-bottom navigation and the rate of progress toward a solution to the problem. He suggested forming a panel or workshop, to include specialists in the development of navigation systems, control of submersibles, etc. The ARC agreed to

cooperate in such an effort. Potential participants were discussed. Bill Ryan agreed to participate for the Committee in an evaluation (workshop or other) of schemes to upgrade ALVIN's control/navigation system.

ALVIN/International Exchanges. The ARC had been asked to address issues concerning the use of ALVIN by foreign institutions/individuals and facilities exchange arrangements for such use. A letter from Don Heinrichs, NSF/OCFS had requested that the ARC:

1. Review and make recommendations on a request for 1989 ALVIN use from the Natural Environment Research Council, United Kingdom (see Appendix IV, 18. Elderfield).
2. Make recommendations for a general policy concerning international use and exchange for ALVIN time.

The ARC agreed to the request. They reviewed the 1989 request along with other requests for 1989 ALVIN use. They made policy recommendations, expressed in Appendix VIII, agreeing to review international requests so long as they were within all tri-partite agency policies and as they would strengthen the programs supported by ALVIN.

General Purpose Use of ATLANTIS II. The request before the Committee for non-ALVIN use of ATLANTIS II (the JGOFS request, 4. Brewer in Appendix IV) had potential to raise again the issue of general purpose use of the ATLANTIS II. The ARC recommended scheduling ATLANTIS II use for JGOFS. Such use could be accommodated in 1989 because of the ALVIN maintenance and overhaul schedule and because of limited 1989 demand for ALVIN, especially in the north Atlantic. The Committee declined to again address the issue of ALVIN priority versus general purpose use of the ATLANTIS II.

Recommendations for new ARC members. Terms expired for two ALVIN Review Committee members, William B.F. Ryan and Georges Weatherly. Both Drs. Ryan and Weatherly remarked that they had enjoyed their terms on ARC but believed that the Committee would be best served by member turnover after three years. The Committee discussed several replacement candidates for the two vacancies and recommended for appointment by UNOLS:

David Cacchione, USGS, Menlo Park
Paul J. Fox, University of Rhode Island

Committee Chair Feenan Jennings expressed his appreciation to both Bill Ryan and Georges Weatherly for their service to ARC and UNOLS.

Planning for 1990 (and beyond). The Committee had earlier discussed supporting a symposium based on research progress

supported by ALVIN over its 25 years. Selected researchers would be asked to characterize ALVIN work in their specialties and to infer from that potential directions for the next several years. It had been agreed that the symposium should be at Woods Hole, early in 1989 and that George Grice would be responsible to prepare a proposal.

A proposal, **Progress in Deep Submersible Research: 25 years of DSV ALVIN; Now What?**, was presented to the ARC. The proposal, prepared by Victoria Kaharl and Fred Grassle, is for a three-day symposium, convened by Fred Grassle. Speakers and discussion leaders would come mainly from recent ALVIN users. Products of the symposium would be a book reviewing important science conducted by ALVIN (edited by Victoria Kaharl) and a summary of recommendations for planning future ALVIN programs.

The ALVIN Review Committee endorsed the symposium concept, the review book and the planning document, and urged that W.H.O.I. submit the proposal.

The ARC discussed their mechanisms for mid-term planning (next three years). The planning workshops held over the winter have been becoming less effective. The San Francisco workshop in December 1987 was sparsely attended, although individual presentations of interest in using ALVIN were interesting and valuable to ARC planning efforts. (See Appendix IX.) The New Orleans workshop (January, 1988) drew only two presentations, both requesting work in 1988. **The ARC is concerned that workshops are no longer gaining adequate input from the community of potential ALVIN users.**

Another indication of poor communication between program managers/sponsors and ALVIN users is the less-than-expected set of north Atlantic requests for 1989.

ARC consensus was that although the workshop concept is less than perfect, the Committee has no better mechanism for garnering planning input from the user community. **The ARC directed that a planning workshop be held in conjunction with the Fall, 1989 AGU/ASLO meeting in San Francisco.** To promote effectiveness the Committee suggest that the workshop be advertised in EOS, and that announcements emphasize that ALVIN's 1990-91 schedule is open. The ALVIN Flyer should also be re-designed. (ALVIN has almost disappeared.)

Summary of ALVIN Program Plans

In 1988, ALVIN/ATLANTIS II will continue scheduled investigations in the northeast Pacific (see Appendix VII). After completing investigations on Gorda-Juan de Fuca in October, a series of biological and geochemical projects will be undertaken in California canyons and basins, then on

a seamount on the EPR. ALVIN/ATLANTIS II will return to Woods Hole, ready for ALVIN overhaul in early 1989.

In 1989 ALVIN will undergo maintenance, overhaul inspection and certification, becoming operational about August 1. (ATLANTIS II will be used in support of JGOFS March-June.) In August an investigation is planned on the Mid-Atlantic Ridge, and in September work will be on continental margins in the north Atlantic. ALVIN/ATLANTIS II will then cross to the Pacific through the Panama Canal for work on the southern East Pacific Rise October-November and in the northern EPR in December. Year's end would be in San Diego.

At the beginning of 1990, the ATLANTIS II will be scheduled for shipyard maintenance and inspection. Beginning in February in San Diego, the ALVIN/ATLANTIS II will be available to support science. The schedule is completely open, from February, 1990 until late 1991. (The ALVIN will again be scheduled for maintenance and overhaul at the end of 1991.) The ALVIN Review Committee emphasizes that ALVIN/ATLANTIS II could be deployed to any ocean area in the world (except extremely high latitudes) for 1990-91. ARC schedule recommendations will be driven by the merit of the science underlying ALVIN time requests and by the ability to organize strong individual requests into effective expeditions. Although the Committee does not at this time have a general itinerary planned, they do recognize high, continuing user interest in several areas (see Appendices IV and IX):

- the Western Pacific from the Lau Basin through the Marianas,
- the southern EPR and western continental margin of South America,
- the northern EPR, continuing work,
- Gorda-Juan de Fuca-Escanaba,
- California basins and canyons,
- Canyons and continental margins in the northwest Atlantic,
- Mid-Atlantic Ridge, and
- West Florida escarpment.

The Committee will work toward that set of projects and expeditions that will provide for the strongest ALVIN-supported science program.

Other Business

Several Committee members urged that a commendation be prepared for presentation at the 1988 UNOLS meeting recognizing Robert Corell for his long, effective service to UNOLS, ARC and the ALVIN program. **The ARC concurred.**

It was agreed that the 1989 review meeting should again be in late June, in Woods Hole. Exact dates will be set in December.

The meeting was adjourned at 12 noon, June 22.

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
G.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>	

UNOLS Review Committee
for DSRV ALVIN

1985

	Term
R.W. Corell, Chairman	7/76-6/88
J.K. Cochran, SUNY-Stony Brook	7/84-6/87
J.W. Deming, Johns Hopkins	7/84-6/87
P.A. Jumars, U. Wash.	7/83-6/86
D.E. Karig, Cornell	7/80-6/86
W. Ryan, LDGO	7/85-6/88
G. Thompson, WHOI	7/84-6/87
G. Weatherly, FSU	7/85-6/88
G.D. Grice, WHOI, ex-officio	3/82-6/88

1986

R.W. Corell, Chairman	7/76-6/88
J.K. Cochran, SUNY	7/84-6/87
J.W. Deming, Johns Hopkins	7/84-6/87
J. Eckman, Skidaway	7/86-6/89
D.E. Karig, Cornell	7/80-6/89
W. Ryan, LDGO	7/85-6/88
G. Thompson, WHOI	7/84-6/87
G. Weatherly, FSU	7/85-6/88
G.D. Grice, WHOI, ex-officio	3/82-6/88

1987

F. Jennings, Chairman	7/87-6/90
J.K. Cochran, SUNY	7/84-6/87
J.W. Deming, Johns Hopkins	7/84-6/87
J. Eckman, Skidaway	7/86-6/89
D.E. Karig, Cornell	7/80-6/89
W. Ryan, LDGO	7/85-6/88
G. Thompson, WHOI	7/84-6/87
G. Weatherly, FSU	7/85-6/88
G.D. Grice, WHOI, ex-officio	3/82-6/88

1988

F. Jennings, Chairman	7/87-6/90
J. Eckman, Skidaway	7/86-6/89
J.C. Casey Moore, UC, Santa Cruz	7/87-6/90
D. Nelson, UC Davis	7/87-6/90
W. Ryan, LDGO	7/85-6/88
M.I. Scranton, SUNY, Stony Brook	7/87-6/90
G. Thompson, WHOI	7/84-6/90
G. Weatherly, FSU	7/85-6/88
G.D. Grice, WHOI, ex-officio	3/82-6/88


UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM
ALVIN Review Committee**AGENDA**

0800 June 20, 21, 22, 1988

Carriage House

Woods Hole, MA

Open the Meeting. Welcome and introduction by ARC Chairman, Feenan Jennings.

Report on 1987 ALVIN/ATLANTIS II season, status of 1988 operations and preview of operational factors for 1989. Barrie Walden and Woods Hole operators will summarize operations since the last meeting, preview remaining season and forecast for 1989.

Report on draft of Submersible Science Study-1987. Bruce Robison will report on the status of the study to assess research submersible requirements for the 1990's and beyond, and present a draft.

Review of Requests for Dives in 1989. Committee discussion and review of new dive requests for 1989. ARC rules and procedures are attached. Approximately 20 Dive Requests have been submitted.

General Purpose Use of Atlantis II. There has been community interest since 1983 in employing the modified-for-ALVIN-support ATLANTIS II for general purpose ocean research. The ARC has made recommendations to UNOLS on this point, but UNOLS has made no formal recommendation either to funding agencies or the community. A non-ALVIN request for use of ATLANTIS II is before the ARC, and must be considered in 1989 schedule recommendations.

ALVIN/International Exchanges. Dive Request 89-18 from H. Elderfield, UK, is before the Committee for review. In addition, to reviewing this request on merit, the ARC may wish to consider other aspects of international exchanges for ALVIN time. See correspondence between Don Heinrichs, NSF and ARC/UNOLS.

Schedule Recommendations for 1989. 1. Based on their reviews of dive requests together with operational/logistical information from WHOI, the ARC will develop their recommendations for the 1989 schedule. 2. WHOI will develop a candidate schedule for ARC review. 3. Review and final schedule recommendation will take account of GOFs request for ATLANTIS II, international exchange requests for 1989 and will explicitly register with three supporting agency representatives to assure that the candidate schedule accommodates each agency's critical program/budget requirements. Although the Committee should not recommend a series of Dive Requests for 1990 (no pending requests) they will need to consider an overall plan for 1990-1991 (see ALVIN Flyer).

Comments on ALVIN program by funding agency representatives. Keith Kaulum, ONR, Bruce Malfait, NSF and David Duane, NOAA.

Recommendations for new ARC members. Terms for William Ryan, and George Weatherly expire. The Committee should discuss and recommend re-appointment or replacement candidates.

PLANNING for 1990 (and beyond). 1. Based on Letters of Interest and dive requests for 1990 and beyond, the ARC should devise a general plan for 1990 and, as practical, 1991 (see materials appended). 2. Review status of the U.S.-France bi-lateral and coordinated MAR project. 3. Hear plans for a winter, 1988-89 ALVIN scientific symposium of participants, now being organized. A draft proposal for organizing/conducting the symposium will be presented. 4. Presumably, no other ALVIN planning workshop would be held winter 1988-89.

Meeting schedule. The hope would be to get through **Reports on ALVIN program status, Submersible Science Study, Review of 1989 Dive Requests, General Purpose Use of ALVIN and International Exchanges** on June 20. On June 21, 1989 **Schedule Recommendations, Funding Agency Comments, Recommend new members, and begin Planning for 1990.** On June 22, finish Planning and wrap up.

**List of Dive Requests, 1989
by Region**

North Atlantic

2. Jannasch, Bio.:	2	4. Brewer, Bio., Chem.:	6 mo., non-ALVIN
5. Thompson, Geol, Chem:	5		
6. Rona, Geol:	5		
7. Grassle, Bio:	2		
8. Edmond, Chem:	5		
11. Ryan, Geol.:	18		
18. Elderfield, Chem.:	<u>4</u>		
	41		

EPR (north), & Volcanoes

3. Levin, Bio.:	2 (1988)
9. Edmond, Chem.:	5
12. Lupton, Chem., Phys.:	10
14. Vanko, Geol.:	10
20. Sinton, Geol.:	<u>20**</u>
	47

California Coast

22. Clark, Bio.	4 (1988)
Hamner	
23. Harrold, Bio	<u>8</u> (1988)
	12

EPR (south)

13. Craig, Chem.:	20**
15. Cande, Geol.:	20**
16. Macdonald, Geol.:	20**
17. Hey, Geol.:	20**
19. Fox, Geol.:	<u>20</u> Withdrawn
	100

Gorda - Juan de Fuca

10. Edmond, Geol., Chem.:	20
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Western Pacific

21. Sinton, Geol.:	20
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Total dives requested: 240

**Summary* by discipline:
(1989 Only)**

Biology:	4
Chemistry:	69
Geology:	178
Physics:	10

* multidisciplinary projects
counted for each discipline

** Austral summer 1989-1990

June, 1988
Woods Hole, MA

SUMMARY
ALVIN SHIPTIME REQUEST

Investigator	Associates	Area	Purpose	Sponsor	Date	Altern	No. Dives	Remarks
1. Paull, C.K.	Martens, C. Neumann, A.C.	32-30N, 76-10W	Carolina Salt Domes, seafloor structures, geological processes and geochemical consequences.	ONR	Fall 1988	Spring 1989	5	Request withdrawn.
2. Jannasch, H.W.	Wirsen, C.O. Bazylinski, D. Molyneux, S.	Mid-Atlantic Ridge, 26-08N, & 44-49W & 23-22N, 44-57W	Microbiological studies at the 23N and 26N Mid Atlantic hydrothermal vent sites.	NSF	Open 1989		2	Recommended for 1989.
3. Levin, L.A.	Mullineaux, L.	Volcano 7 13-20N, 102-30W	Benthic Boundary Layer Investigations on Volcano 7 Summit.	ONR	Oct., Nov., 1988		2	Recommended for 1988.
4. Brewer, P.G.	Martin, J. Marra, J. Ducklow, H.	North Atlantic, Section along 20W from 60N to 20N	U.S. participation in the JGOFS North Atlantic Pilot Study.	NSF	March July 1989		None	Recommended for 1989 (March-June).
5. Thompson, G.	Humphris, S.E. Tivey, M. Honnorez, J.	Mid-Atlantic Ridge, 26N, 45W- TAG hydrothermal region.	Interdisciplinary study of active vents on the Mid-Atlantic Ridge. Geological, geochemical, & mineralogical investigations.	NSF	May- Sept. 1989	Any	5	Recommended for 1989.
6. Rona, P.A.	Thompson, G. Edmond, J.	Mid-Atlantic Ridge 26-08N, 44-49W, & 23-22N, 44-57W	A cooperative investigation of hydrothermal processes on the Mid-Atlantic Ridge at the TAG hydrothermal vent field and the snakepit hydrothermal fields.	NOAA	April- August 1989	Oct.- Nov. 1989	5	Recommended for 1989.
7. Grassle, F.	Van Dover, C.	Mid-Atlantic Ridge, TAG & Snakepit 23-22N, 44-57W & 26-08N, 44-49W	Comparative ecology of hydrothermal vent populations.	NSF	May- Sept. 1989	Any	2	Tabled.
8. Edmond, J.	Thompson, G. Grassie, F. Rona, P.	Mid-Atlantic Ridge 23N & 26N	Interdisciplinary study of active hydrothermal vents on the Mid-Atlantic Ridge.	NSF	Spring 1989	Any	5	Recommended for 1989.
9. Edmond, J.		East Pacific Rise at 21N, 109W	A time series of vent fluid compositions from 21N, EPR	NSF	1989	Transit to San Diego	5	Recommended for 1989.
10. Edmond, J.	Franklin, J. Tunnicliffe, V.	Juan de Fuca, 48-40N, 128-30W	Investigation of the sediment ore body and associated black black smoker activity in Middle Valley, Juan de Fuca.		Summer 1989	Summer 1990	20	Tabled.

SUMMARY
ALVIN SHIPTIME REQUEST

June 1988
Woods Hole, MA

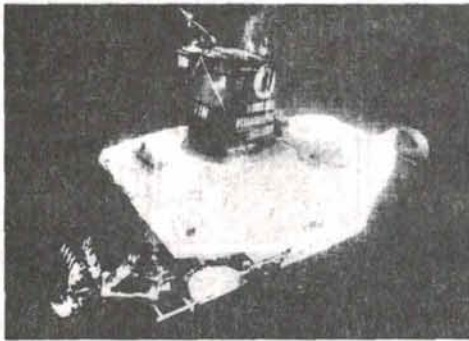
Investigator	Associates	Area	Purpose	Sponsor	Date	Altern	No. Dives	Remarks
11. Ryan, W.B.F.	Mayer, L. Twichell, D.	1. 38-42N to 38-53N & 72-35W to 72-55W. 2. 40-25N to 41-10N & 70-00W to 70-55W.	Anatomy, age and origin of passive margin unconformities.	NSF	Spring/ Summer 1989	Next avail. period	18	Recommended for 1989.
12. Lupton, J.	Washburn, L. Johnson, K.	EPR, 1st choice: 21N, 2nd choice: 13N.	Mixing and entrainment in hydrothermal vent plumes.	NSF	1989	Early 1990	10	Recommended for 1989.
13. Craig, H.	Edmond, J. Welhan, J. Ballard, R. Macdougall, J.D. Schilling, J.-G.	Southern EPR, 26-27S, 112-30W 31-32S, 112W, (both on EPR crest).	Study of the Pascua Hot Spot hydrothermal vents, Southern East Pacific Rise.	NSF	Nov.- Dec. 1989	Jan.- Feb. 1989	20	Not recommended.
14. Vanko, D.A.	Stakes, D.S. Harper, G. Batiza, R.	EPR, 16 to 17.5N, 111 to 112W.	Geology of the Mathematician Ridge foiled rift, East Pacific.	NSF	Summer 1989	Open	10	Not recommended.
15. Cande, S.C.	Lewis, S. Karig, D.	46S, 76W.	Interaction of the Chile Ridge & Chile Trench.	NSF	Jan.- Feb. 1990	Late 1989- Mar. 1990	20	Tabled.
16. Macdonald, K.	Moore, J. Hopson, C. Fox, J. Miller, S. Morton, J. Sempere, J.-C. Haymon, R.	EPR at 8S & 19-30S. Deepest depth: 3400 m.	Crustal accretion processes at fast spreading rates.	NSF	Dec. 1989	Nov. 1989- Apr. 1990	20	Recommended for 1989.
17. Hey, R.N.	Schilling, J.G. Craig, H. Naar, D. Francheteau, J. Searle, R. Mahoney, J.	Easter micro- plate near 25S, 115W.	Investigation of critical parts of the Easter microplate boundaries.	NSF	Early 1990	Late 1989 or 1990	20	Tabled.
18. Elderfield, H.	Thompson, G. Edmond, J. Klinkhammer, G. Jannasch, H. Grassie, F. Rona, P. Nelson, T.	MAR, 26N & 23N	Sampling for hydrothermal fluids & associated deposits at TAG (26N) & Snakepit (23N) hydro- thermal fields on MAR.	NERC	May- Sept. 1989		4	Recommended for 1989.

SUMMARY
ALVIN SHIPTIME REQUEST

June 1988
Woods Hole, MA

Investigator	Associates	Area	Purpose	Sponsor	Date	Altern	No. Dives	Remarks
19. Fox, F.J.	Gallo, D.G. Heknian, R. Choukroune, P.	13-30S, 111-41W	To establish how high strain rates are accommodate along the Garrett Transform.	NSF	flexible (but within austral summer window)	Late 1989	20	Withdrawn.
20. Sinton, J.	Hey, R.N. Batiza, R Kleinrock Macdonald, K.	2-25N, 95-30W	Investigation of rift failure & rift propagation, Galapagos 95W.	NSF	Early 1990	Late 1989	24	Tabled.
21. Sinton, J.	Taylor, B.	Manus Basin 149-150E	Back-arc volcanism and seafloor spreading in the Manus Basin.	NSF	1990	Late 1989	20	Tabled.
22. Clark, E. Hammer, W.	Kristof, E. Robison, B.	Monterey Canyon, California	Passive observing of short-range pray location.	Nat. Geog. Soc.	1988		4	Recommended for 1988.
23. Harold, C.	Watanabe, J Foster, M. Cailliet, G Oliver, J.	Monterey Bay, California	Flux of material into the deep sea; distribution & utilization of benthic algal drift from giant kelp forests.	NOAA	1988		8	Recommended for 1988.

The University — National Oceanographic Laboratory System



Opportunities for Oceanographic Research **DSV ALVIN** at the Woods Hole Oceanographic Institution **1989**

The Deep Submergence Vehicle ALVIN

The Deep Submergence Vehicle ALVIN, based at 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.

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 recommendation for ALVIN-ATLANTIS II areas of operation two and three years in advance and makes schedule recommendations 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 advance planning.

As one basis for advance planning, the ARC conducts annual workshops (December, 1987 and January, 1988 for this planning cycle) to solicit interest in using ALVIN two, three and more years into the future. On the basis of these workshops and Notices of Intent, the ALVIN Review Committee each year issues a PROSPECTUS outlining interest in and the ARC's recommended tentative plans for ALVIN two and three years in advance (i.e., the 1988 PROSPECTUS will recommend broad areas of operation of 1990 and beyond.)

Through this *Opportunities for Oceanographic Research, DSV ALVIN*, the ARC solicits requests for ALVIN dives, to be reviewed by the Committee in June, 1988. On the basis of that review, the ARC will make 1989 schedule recommendations to the three funding agencies and to the W.H.O.I. operators.

Recent and Scheduled Operations

At their May, 1987 meeting, the ALVIN Review Committee reviewed and made recommendations on ALVIN Time Requests for operations in 1988. Scheduling recommendations were made for work in the eastern Pacific. The Committee was careful to recommend only those projects and the number of dives that could be completed in 1988 so that no queue of already-recommended investigations/dives remains for 1989.

The 1987 ALVIN diving program, supported by the ATLANTIS II, was again highly successful. Operations began in January with several projects off California, then off Hawaii and in the central Pacific. From April through July investigations were conducted in the Marianas region and Bonin arc, followed by a series off the Oregon-California coast and on Gorda-Juan de Fuca (September, October). After another set of dives in California basins, operations ended for a period of shipyard maintenance. Reliability of the operations and facility is illustrated by noting that of the 165 dives scheduled, only five were lost, four for weather, one for personnel, and none due to mechanical problems with ALVIN.

The 1988 season again began in January with an investigation off California, to be followed by investigations in Guaymas Basin (January-February), EPR (March), near the Galapagos (April) and return to San Diego. A series of investigations in Escanaba Trough, off Oregon-California and on Gorda-Juan de Fuca will be conducted June through September followed by a series off California and then return to Woods Hole for ALVIN overhaul.

Requests for 1989

In 1989 ALVIN will undergo a four-to six-month overhaul at the Woods Hole Oceanographic Institution. Following that overhaul and related testing/certification dives, ALVIN/ATLANTIS II will be available for reasonably extended operations in 1989. There should be no backlog of already-recommended Time Requests to be conducted in 1989. The ALVIN Review Committee notes that interest has been expressed in investigations in several geographic regions that would be logistically feasible in the four to six months possibly available for 1989 operations. The ALVIN Review Committee solicits and will consider ALVIN Time Requests: in the north Atlantic (including reasonably high latitudes), in the Gulf of Mexico and Caribbean, in the equatorial and south Atlantic and in the eastern Pacific (but probably excluding high northern latitudes).

The Committee recognizes that it will not be operationally feasible to pursue investigations in all or even most of these regions during 1989. The Committee will recommend for scheduling the strongest, most effective and logistically compatible requests submitted. No ALVIN Time Requests for dives to occur after December, 1989 will be considered. Requests that cannot be accommodated in 1989 will revert to tabled status. The Committee will suggest that investigators who so desire re-submit these requests for later annual reviews.

To help potential investigators in their mid-range planning the ALVIN Review Committee is developing probable sequence of operating areas for the period between major ALVIN overhauls. In consideration of notices of interest pending from ALVIN planning workshops held in 1983 through 1988, together with other likely interest, the ARC advances this likely scenario: ALVIN/ATLANTIS II operations in the Atlantic would begin in mid-1989 and continue for a few months. Operations would then continue along an efficient route into the Pacific, either through Caribbean, Gulf of Mexico, Panama, or through the Scotia Sea. Operations for 1990 would begin and remain for the entire year in the Pacific, in areas decided by the merit of requests/proposals. Operations in 1991 would likely also begin in the Pacific, but ALVIN/ATLANTIS II would return to the Atlantic in time to do some work, including, possibly, cooperative work on mid-Atlantic Ridge, before returning to Woods Hole for the next scheduled ALVIN overhaul.

ALVIN Time Requests through UNOLS are for the 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 funding agencies. (NSF has reiterated their policy that proposals involving the use of UNOLS ships must meet the proposal target date of June 1 in the year preceding operations.) ALVIN Time Requests for which the associated science proposal has not been submitted by June 1 are of such uncertain funding status that, realistically, they cannot be reviewed by the Committee.

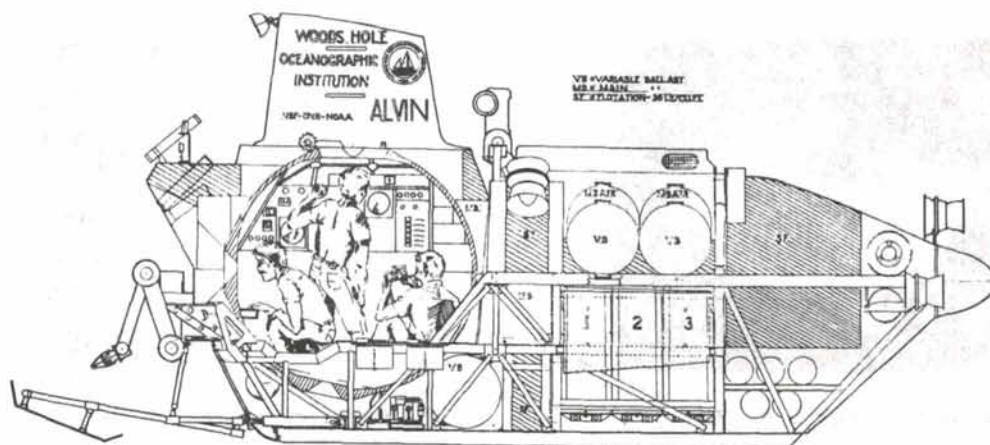
Time Requests will be reviewed by the ARC at their June, 1988 meetings to recommend projects. Criteria for the review include scientific merit and suitability for ALVIN/ATLANTIS II. The committee will make schedule recommendations based on recommended Requests.

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

Requests for 1989 must be received in the UNOLS Office by May 1, 1988. 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.

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



DSV ALVIN

Description of DSV ALVIN

Length: 7.6 meters (25 feet)
 Beam: 2.4 meters (8 feet)
 Draft: 2.1 meters (7 feet) surround
 Full Speed: 2 knots
 Cruising Speed: 1 knot
 Cruising Range: 5 miles submerged
 Displacement: 18 tons
 Endurance: 72 hours
 Normal Drive Duration: 6-10 hours
 Depth Capacity: 4,000 meters (13,120 feet)
 Complement: 1 pilot, 2 scientific observers
 Ownership: The submersible ALVIN is a Navy owned national oceanographic facility operated by the Woods Hole Oceanographic Institution and jointly supported by the National Science Foundation, the Office of Naval Research and the National Oceanic and Atmospheric Administration.
 Communications: Sonar telephone, voice or code (submerged); marine band UHF radio (surface).
 Navigation: Gyro compass; magnetic compass; forward looking horizontal scanning sonar system (CTFM); echo sounder; indicators for depth and altitude; long baseline acoustic positioning system (by request).
 Electrical Power: Three banks of lead-acid batteries configured for 120 VDC (450 Amp. hours) and 30 VDC (450 Amp. hours) A limited amount of 115 volt 60 cycle AC power is also available.
 Hydraulic Power: The Science basket is supplied with 1 GPM of 1500 PSI hydraulic oil for science applications.
 Data Logging: Most of the information obtained from the permanently installed instrumentation is logged on 3-1/2 inch computer disks. Also, selected data is superimposed on the video camera images and recorded on 1/2" VHS tape. Contact the ALVIN group for more information.
 Additional capabilities: The submersible is designed to be versatile with respect to payload, space and power available 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, two 35 mm. cameras and a closed circuit video system with recorder. Additionally, specialized equipment such as hot water samplers, precision temperature sensors, a magnetometer and increased navigation capability is available but requires advance notice and may require additional funding for installation and operation. Contact the ALVIN group for further information.

Description of RV ATLANTIS II

Built: 1963
 Beam: 44 feet (13 meters)
 Gross Tonnage: 1,529 tons
 Crew: 27
 Length: 210 feet LOA (64 meters)
 Draft: 16 feet (5 meters)
 Displacement: 2,300 L tons
 Scientific Personnel: 9 ALVIN support team plus 1 corpsman plus 19 scientists
 Main Engines: Two GM 12-567E diesel engines driving through reduction gears with variable speed, hydraulic clutches. 2,000 shp.
 Bow Thruster: 800 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: 11.0 knots
 Full: 13.5 knots
 Minimum: Dead Slow
 Endurance: 45 days
 Range: 9,000 miles
 Fuel Capacity: 90,000 gallons
 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.

To obtain further information regarding ALVIN/ATLANTIS II system capabilities or specialized equipment contact:

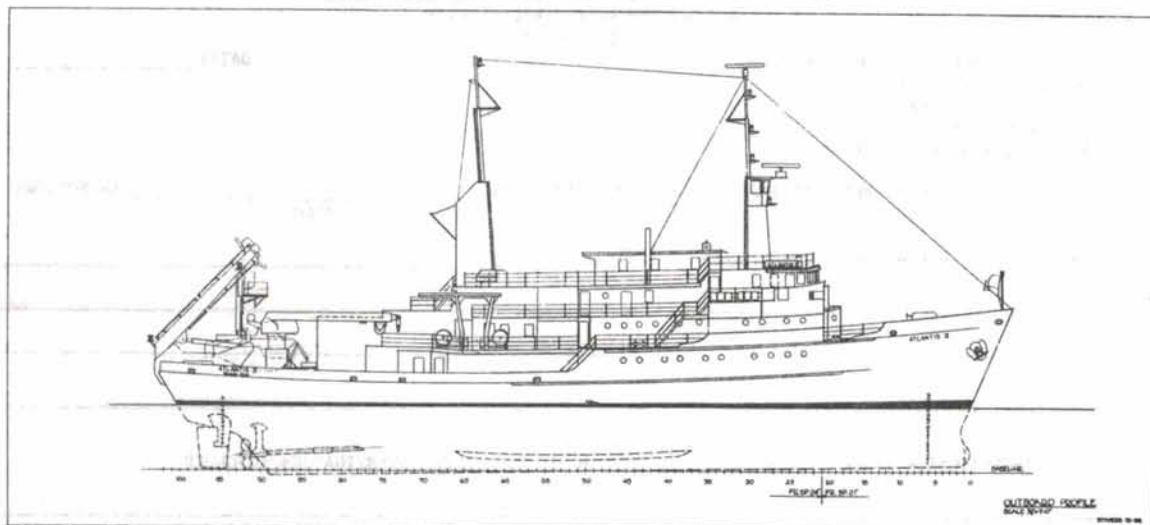
Woods Hole Oceanographic Institution
 Woods Hole, MA 02543
 Telephone: (617) 548-1400

ALVIN Information:

Barrie B. Walden, Submersible Program Manager
 Extension 2407

ATLANTIS II Information:

Donald A. Moller, Marine Operations Coordinator
 Extension 2277



RV ATLANTIS II

Submission of ALVIN Time Requests

Requests for the use of DSV 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; how ALVIN will be employed is critical to the Committee's evaluation;
3. Justifications of the need for ALVIN to do this work;
4. The research site(s) and its justification;
5. Number of dives required, justification for the number of dives and any seasonal consideration; it is especially important to include a dive plan or other description of how each dive will be used, and why each is critical.
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; in virtually all cases science proposals should already have been submitted by the date of the Committee's review;
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 scheduling recommendations for consideration by the research sponsor. Final scheduling depends on approval of the pertinent research proposal by the funding agency.

ALVIN Review Committee

F. Jennings, Texas A&M University
 J. Eckman, Skidaway Institute of Oceanography
 J. C. Moore, University of California, Santa Cruz
 D. Nelson, University of California, Davis
 W. B. F. Ryan, Lamont-Doherty Geological Observatory
 M. Scranton, State University of New York, Stony Brook
 G. Thompson, Woods Hole Oceanographic Institution
 G. Weatherly, Florida State University
 G. Grice, Woods Hole Oceanographic Institution, **ex-officio**

UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM
DEEP SUBMERGENCE VEHICLE ALVIN
TIME REQUEST

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

DATE: _____

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

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 and 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).

COUNTRIES FOR WHICH RESEARCH CLEARANCE WILL BE REQUIRED: _____

FUNDING STATUS

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

ATTACH RESEARCH PROPOSAL OR PRELIMINARY PROPOSAL ADDRESSING POINTS LISTED ON OVERLEAF

SUBMITTED BY _____ SIGNATURE

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

APPROVED _____ DEPARTMENT CHAIRMAN
or
LABORATORY DIRECTOR

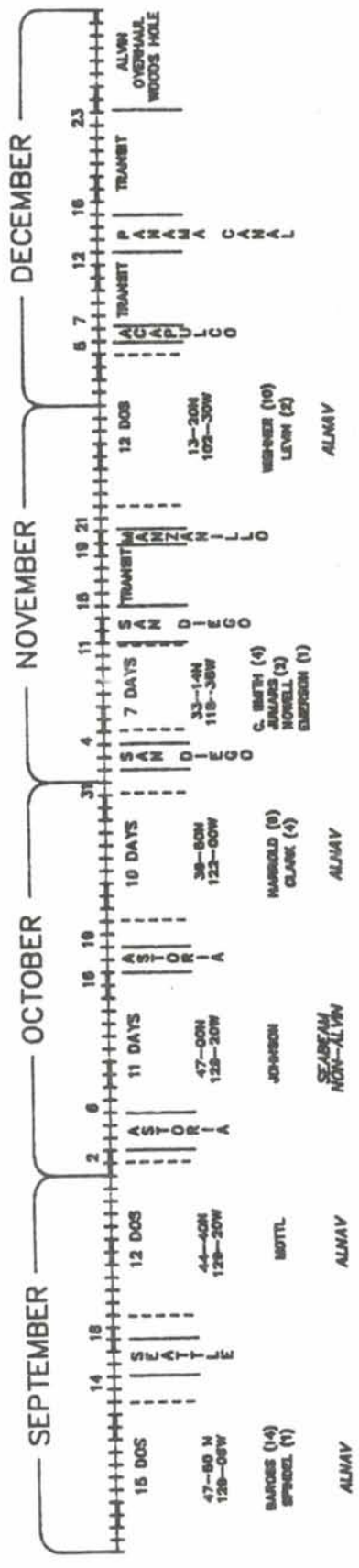
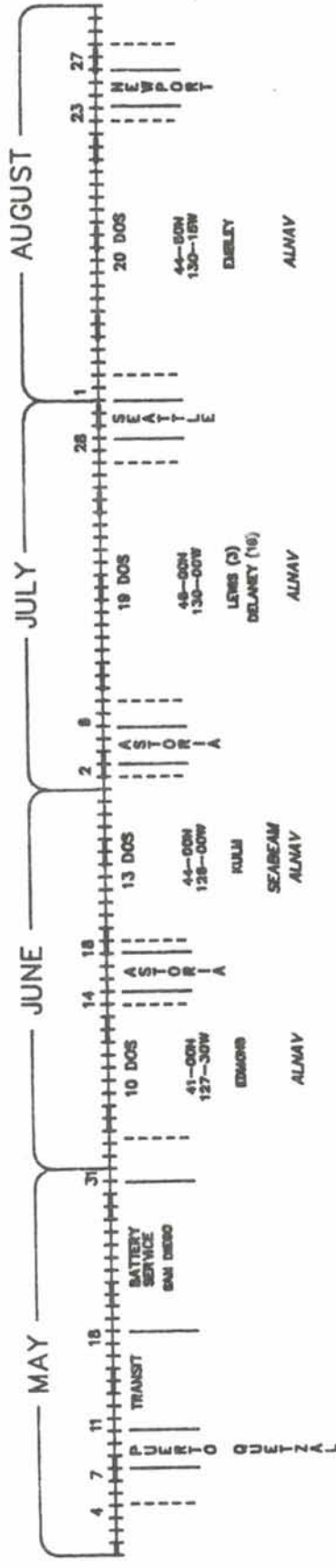
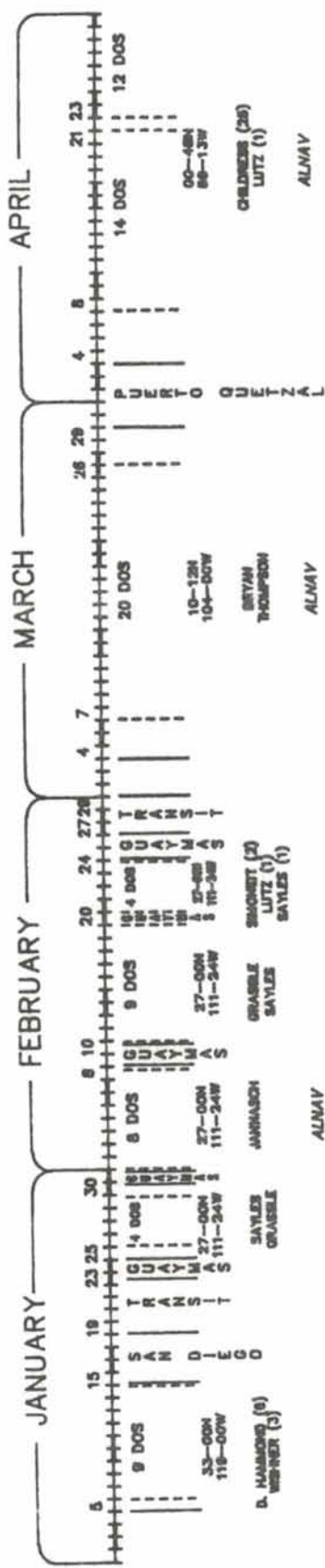
April 15, 1987

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 questions 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.

ALVIN OPERATIONS

15 JULY 1968
 16 JULY 1968
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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

September 15, 1988

To: Don Heinrichs, NSF
David Duane, NOAA
Keith Kaulum, ONR

Through: George Keller, Chair, UNOLS

From: Feenan Jennings, Chair, ALVIN Review Committee

Subject: ALVIN/International Exchanges

In my May 20, 1988 response to your request that ARC should address issues concerning international exchanges, I agreed that the Committee should, in session, consider policy issues. The ARC, during their June 20-22, 1988 meeting discussed those policy issues and interacted with representatives of the three sponsoring agencies. In addition, the Committee reviewed the one request before them that represented an international exchange.

In reaching recommendations, the ARC recognized that a policy on international exchange should be in accord with the Memorandum of Agreement among NSF, NOAA and ONR as well as with policy concerning national oceanographic facilities.

We understand that the priorities for use of ALVIN are as follows:

- | | |
|-----------------|---|
| Priority One: | Use by the three sponsoring agencies, within the basic agreement, which is at present 150 days. |
| Priority Two: | Use by the three sponsoring agencies over and above the basic agreement, and |
| Priority Three: | Use by other agencies, institutions, foreign governments, etc. |

Within these priorities, the ARC would:

- review all requests for ALVIN use, including international requests;
- make their recommendations on international exchange requests as part of the program exceeding tri-agency requirements, and
- support the strongest program available.

The ARC requests that they be notified in advance of any international request which, because of supporting agency policy could not be granted. In those cases, ARC would decline to review the request and would return it.

ALVIN/ATLANTIS
Notification of Intent Summary
Submitted 1983-1988

June, 1988
Woods Hole, MA

Investigator	Associates	Area	Purpose	Sponsor	Date	Alternate	No. Dives	Remarks
1. Batiza, R.	Simkin, T. Fornari, D. Smith, T. Allen, J. Koppel, E.	12-43N, 102-35W (Volcano 6)	Mapping of hydroclastic deposit to test hypothesis for formation	?	Not Specified	—	6	
2. Taylor, Brian	Sinton, J Craig, H. Perfit, M.	Western Pac. 1. E. Woodlark Basin 2. W. Woodlark Basin	Investigations of ridge subduc- tion volcanism associated with continental rifting and fast back-arc spreading	NSF AID Australia	1988/89	--	1. 5 2. 10	
*4. McMurtry, G.	Karl, D. Kroenke, L. Malahof, A. Sinton, J.	North Fiji Basin, (South Pordota Ridge, NFB central spreading Center, Fiji Fracture Zone)	Investigation of hydrothermal systems in North Fiji Basin	NSF USAID	Winter 1988/89	Fall-Spring 1988-1989	20	
*9. Batiza, R. Longmuir, C. Bender, J.	Kappel, E. Fornari, D. Allan, J.	EPR, 8-30N to 12-30N	Observations and samples for petrologic and tectonic investigation of DeVal's on EPR	Not Specified	1987	?	20	Presented by Bender, 1/12/86
12. Hecker, B.	Grassle, J.F. Grassle, J.P. Lutz, R. Turner, R. Wishner, K.	West Fla. Escarpment seeps 26N, 85W	Structure and dynamics of deep-sea communities at West Florida Escarpment seep side	NSF	Spring, Summer 1988	any good weather	18	Presented by F. Grassle, 1/12/86; Request submitted 5/86; Tabled.
14. Lutz, R.	Hecker et al	West Fla. Escarpment Seeps 26N, 85W	Molluscan studies. Deploy arrays for long term incuba- tion and recovery in 88 et seq. (See #12, Hecker).	NSF	1986 1988	good weather	2-86 ?-88	Presented by F. Grassle, 1/12/86. Request submitted 5/86; Tabled.
17. Kappel, E.	Ryan, W.B.F. Langmuir, C. Christie, D. Franklin, J.	Explorer and Endeavor Ridges 49 to 50N, 47-50 to 48N NE Pacific	Vulcanism, tectonics, petrology, structure, stratigraphy, gravity on mid-ocean spreading center.	NSF and EMR, Canada	Spring or Fall 1988 or beyond		15	Presented by W.B.F. Ryan, 1/12/86

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18a. Cacchione, D. 18b. Gardner, D. 18c. Field, M. Drake, D. Edwards, B. McCulloch, D. Karl, H.	Hampton, M. Gardner, D. Field, M. Drake, D. Edwards, B. McCulloch, D. Karl, H.	Western EEZ, at a. 40-30N, 125W b. 46N, 126W and c. 37N, 126W	Geological research and mapping in Western U.S. EEZ (At Gorda Escarpment and Fan, Astoria Fan and Cascadia Channel and Tanney Seamount	USGS	1987	1988 or 1989	a.15 b.10 c. 8	No recent USGS expressions on these.
20. Smith, C.	Jumars, P.	Continental borderlands off S. Calif. (esp. Santa Catalina Bas.)	Megafunal bioturbation and infaunal succession at the deep sea floor.	NSF	Summer & Fall, 88 or 89	Spring or Winter, 88 or 89	3 cru 6 ea	Timing similar to Jumars et al in 86/87
21. Flood, R.	Shor, A.	Hudson Channel/ Upper cont. rise to 4000 m.	Study recent sedimentary processes on the Hudson Rise Channel. Precise sampling of channel floor and wall.	NSF	Summer, 1988	Spring 1988	12	Use SEA BEAM, gravity and piston corers
22. Flood, R.	Hecker, B. Shor, A.	Amazon Fan off NE Brazil	Study of surficial sediments and organisms in submarine fan channels and the canyon of the deep sea fan	NSF	1988		15	Brazilian clearance. Dr. M. Gorini, Collab.
23. Flood, R.		Blake Outer Ridge, eastern U.S. margin	Deploy, recover and follow up long-term (1 yr.) experiments on bottom current effects on bed forms and bed form dynamics.	NSF	June '88 June '89 June '90	Spring, Summer	10 per year	SEA BEAM, gravity coring
Notices Pending From 1983, 1984								
6. Hollister, C.	Flood, R.	Rockall Basin, NE Atlantic	Sediment dynamics of Rockall trough	NSF or ONR	Midsummer 1988		20	
47. Karig, D.	Hussong, D.	Timor Transect Approx. 10S, 125E	Geophysical study of: role diapirs slumps, etc., deformation, water egress, age control	NSF	After 1986		10	Submitted Dec. 1984

86/2. Lonsdale, P.	Christie, D. Francheteau, J.	1N, 102W, EPR	Geologic study and sampling of boundaries of Galapagos Microplate.	NSF-1 (1/87)	Mid 88	Mid 89 or avail.	15	If not funded for 88 ops, will resubmit for 89 or later.
86/5. Hessler, R.R.	Childress, J. Johnson, K. Somero, G. Felbeck, H. Vetter, R.	Galapagos Hydro-thermal vents	Study temporal & spatial changes in hydrothermal vent faunas; study physiological & biochemical properties of vent organisms. Cruise essential for follow up temporal studies on 1988 visit.	NSF	Early 1990	Part. Negot.	20-25	Presented 12/86

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86/9. Kulm, L.D.	Suess, E. and others	Central Peru Slope, 11-12S and 9-10S	Investigation of tectonic processes and fluid venting in forearc basin	NSF	1989 and beyond	-	25 (10 at 11-12S, 25 at 9-10S)	Replaces Notice 8 made Dec., 1985
86/10. Kulm, L.D.	Carson, B. Suess, E. Lewis, B. Moore, C.	Central Oregon Continental Slope	Monitor fluid venting processes on Oregon Continental margin	NSF	1990 (continuing)	-	25	Extension of investigations approved 87/88.
86/11. Grassle, J.F.	Whitlatch, R. Aller, R. Honjo, S.	Panama Basin	Animal-sediment relationships and sediment geochemistry in a low energy environment	NSF	1989	-	10	Large scientific party. Follows earlier work presented 12/86.
85/13. Shor, A.	Piper, D.J.W. Vandover, C. Others	Laurentian Fan (North Atlantic)	Biological and geological studies of 1929 Grand Banks turbidite area.	NSF	1988 or 1989	-	about 10	Presented 12/86. Builds on 1986 work.
87-4 Hawkins, J.W.	Lonsdale, P.	Lau Basin, SW Pacific 15°S, 174°W 19°S, 176°W	Studies of petrology, hydrothermal vents - polymetallic sulfides, tectonics	NSF, MGG	1990 Jan.-Sept.	1991	18	Reinforces earlier Notices of Intent, Requests. Discussed 12/6/87 (Taylor)
87-5 Jannasch, H.W.		EPR, 11°S, 13°S, 21°N, Guaymas Basin (or any newly discovered vent site)	Studies and isolations of thermophilic archaeobacteria from hot geothermal vent sites.	NSF &/or ONR	1990 & '91	-	5/yr	
87-6 Karson, J	Toomey, D. Casey, Jack	22°N-24°N MAR & Kane Transform	Surface structural & lithological studies of rift valley & transform in areas with microseismic studies.	NSF	1989	When possible	20	
87-7 Taylor, B.	Sinton, J. Craig, H. Hessier, R.	3-4°S, 149-151°E	1. Structural & petrologic characterization of back-arc spreading center at 3 points along strike. 2. Structural & petrologic character of ETR. 3. Geochemical & biological studies of western Pacific hydrothermal systems.	NSF	late 1989	1990	1. 18 2. 12 3. 15	Reinforces earlier notices of intent. Presented 12/6/87. In part, Request by Sinton (89-21)

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87-9 Deming, J.	Prieur, D. Gall, F. Desbruyeres, D.	Mid Atlantic Kane/Snake Pit 23N	Determine barothermostability of biological, esp. bacterial components and processes at unusually deep vent fields.	NSF or ONR; IFEMER/ ELF	1990	Spring or Summer 1991	18	Possible follow-up using NAUTILE
87-14 Hammond, S.	Massoth Embley Feely Fox Baker	Juan de Fuca Ridge	Sample vent fluids, geological mapping & sampling, place vent monitoring devices.	NOAA	1990	1991	20/yr	
87-15 Rona, Peter	Bougault Thompson	MAR	Investigation of hydrothermal processes, including water chemistry, heat transfer, precipitates, basalts, structural controls and biota.	NOAA NSF IFEMER	1990- 1992		20/cr	



