UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

UNOLS Council Meeting

Summary Report

16 September 1998

National Science Foundation, Room 1235
4201 Wilson Boulevard
Arlington, VA

UNOLS Council Meeting Report
National Science Foundation, Room 1235
4201 Wilson Boulevard
Arlington, VA
16 September 1998

Appendices

Wednesday, 16 September 1998

INTRODUCTION - The UNOLS Council met in Room 1235 of the National Science Foundation on 16 September 1998. Ken Johnson, UNOLS Chair, called the meeting to order at 0830. The items of the agenda, ***Appendix I,*** were addressed in the order as reported below. The participants of the meeting are listed in ***Appendix II.***

ACCEPTING MINUTES - The minutes from the July 1998 Council meeting were accepted as amended (pg. 11, 3rd para. change "model" to "process;" pg. 12, 1st para. change "HERRING" to "HERON").

COMMITTEE REPORTS - Committee Chairs submitted their written reports in advance of the meeting and are included as ***Appendix III.*** Ken Johnson summarized each report. The Chairs provided updates and additional information not included in the written reports.

Ship Scheduling Committee (SSC) - Ken Johnson opened the committee reports with the Ship Scheduling Committee. He announced that the chair, Don Moller, would be retiring from WHOI at the end of the year and expressed his and the community's appreciation for the excellent work Don has provided in scheduling. Ken presented a series of viewgraphs (***Appendix IV***), which list by ship the operating days from 1995 through the projected days for 1999. The totals reflect a near record high number of days for 1998 at 5355. In 1998, EWING and ENDEAVOR were slated for lay-up periods. However, both ships were successful in scheduling programs. EWING scheduled private work and ENDEAVOR scheduled NOAA fisheries work. The total days projected for 1999 is 4795 with a likelihood of growing. Class V ship demand is high in 1999.

Another table reflects the charge days for large ships during the same period of time. Most striking in these numbers is the percent decline in NSF use, from 85% to 55% over the five years and the increased usage by Navy (both ONR and NAVO) as well as NOAA. In 1999, NOAA jumps to 12.4% of the total use which is primarily the result of BROWN not being available for Pacific work while it completes an expedition to the Indian Ocean. Similar trends are reflected in the chart that includes the charge days for the entire fleet. Other viewgraphs shown depict the large ship work areas where it was noted that there is only one Atlantic program. Also shown were the ATLANTIS work areas for 1999 and the funded ALVIN and ROV dive programs. The funded programs for ALVIN provide a full schedule for ATLANTIS and an aggressive schedule for the ROVs.

Don will be stepping down as SSC chair after serving in that position for four years. Mike Prince has been elected as Don's replacement. Joe Ustach has been elected as the SSC Vice Chair.

GLOBEC cruises for 1999 remain unsettled as the funding for the NOAA portion of these cruises is sorted out. This has an impact on five different ship schedules. Projections for 2000 suggest that East Coast intermediate ships may have light schedules.

Arctic Icebreaker Coordinating Committee (AICC) - The AICC, chaired by Jim Swift, has been working with the USCG planning science systems testing for HEALY. The ship is unofficially projecting a six-month delay in delivery, which is likely now to be in June 1999. Shake down and systems testing will start later in that year and will take about 12 months to complete. It is possible that a HEALY Ship Of Opportunity (SOO) cruise could be available late in 2000. The USCG has been active in familiarizing their personnel with UNOLS technical support. They have been sending their technicians out on UNOLS ships to prepare them for HEALY science operations. This program is progressing well. In other activities, the AICC has been busy in the past year coordinating science of opportunity cruises in the Arctic.

Fleet Improvement Committee (FIC) - The FIC, chaired by Larry Atkinson, has established two subcommittees to draft Science Mission Requirements (SMRs) for both an ALPHA HELIX replacement and an east coast coastal vessel. Draft SMRs have been developed. The HELIX SMRs call for ice strengthening and a fisheries capability as well as conducting general academic oceanographic science. The FIC has also been working with the Navy in reviewing the design for the AGOR-26 SWATH vessel.

Don Heinrichs announced that NSF's representative to FIC, Dick West, would be retiring in October. His duties, with respect to FIC, will be split between Don, Dolly Dieter and Sandy Shor.

Research Vessel Operator's Committee (RVOC) - Paul Ljunggren is the chair of the RVOC. Their annual meeting is scheduled for 4-6 November in Hawaii. The meeting will include presentations on new research vessel construction projects under consideration or in progress.

Other RVOC meeting plans include a presentation by Jamestown Marine Services on the NSF inspection program. Medical Advisory System has the new contract for providing medical advice and will be making a presentation. ABS Marine Services will be making a presentation on watchkeeper training (STCW) as well as an overview on the International Safety Management Code (ISM).

The RVOC has completed a safety video, which was available for viewing over the noon hour at the Council Meeting. The Committee has also been working on a revision to the Safety Standards. Elections will be held for the RVOC Chair and Vice Chair.

New small vessels in planning or under construction include, SAVANNAH, a replacement for BLUE FIN, a CALANUS replacement, a SUN COASTER replacement, a WHOI SWATH and a new vessel at U. Conn (R/V CONNECTICUT will arrive at the university in December 1998).

Round Table Discussion by Agency Program Managers - Science program managers from NSF, ONR, NOAA and USCG held an open discussion period on ship needs, projections and fleet issues. Included in the discussion were NSF: Dave Garrison, Dave Epp, Connie Sancetta, Kendra Daly and Paul Dauphin; ONR: Tom Kinder, Lou Goodman, Ron Ferek, James Eckman and Scott Tilden; NOAA: Steve Piotrowicz and Liz Clark; USCG, George Dupree. Each of the program managers had an opportunity to discuss their views on UNOLS and its ability to support the fleet. They also reported briefly on future science long-range plans and support needs.

Over the hour and a half, discussion of the fleet revolved primarily around technical support, scientific tools and the coordination and support of these tools. Very few comments were made on the ships and ship management. It was generally felt that more emphasis was needed on quality control of technical support. There is a perceived need for more support for onboard systems such as SeaBeam and IMET. There will also be a need for sophisticated imaging systems. Demand for specialized equipment is growing. It was suggested that UNOLS should develop a vision and strategy for specialized equipment acquisition and support: (1) what type of equipment will be needed in five to ten years, and (2) what support (people) will be needed to operate and maintain these systems? The question was asked whether specialized equipment (e.g. Seasoars) should be bought for the PIs, or would it be best to buy them for the ship operations, in which case, the operator would be required to maintain the equipment.

The issue of the "interchangability of ships" was also raised, in particular in regard to specialization. There was discussion on whether the UNOLS ships should be more specialized in their capabilities. There was concern that this may increase the chances of lay-ups if the general-purpose characteristics of ships are compromised. Another issue associated with interchanging ships is the financial complexities due to differing cost structures among the ship operators. Some operator's charge user fees for shared use equipment, while other operators do not. This can create a problem for PIs who are

rescheduled from a ship that does not charge user fees to one that does charge fees. New NSF guidelines will hopefully alleviate this problem, by moving the user fees from the science budget into the technician program budget.

There are still a few complaints being received regarding the ship scheduling process. These mostly are directed towards communications problems between the PI and operator.

The group discussed programs that are on the horizon such as long term ocean observation, GLOBEC, ECOHAB, LWAD, CLIVAR, Deep Ocean Carbon, Australian Monsoon program, and the OBS program. The Navy is moving toward more coastal studies. Increasing emphasis is on sensors that can be deployed remotely, autonomously or are expendable. There is a need to improve coring capabilities to successfully deploy a 30-meter core. NOAA is anticipating more need for charters in fish research. A few program managers noted the need for quick response platforms to study such things as bloom phenomenon. These studies require flexibility in scheduling which has posed a challenge for UNOLS and the funding agencies.

In general, there seems to be a consensus for the need to push for new technologies and that the technical support to scientists needs to grow as the technical advances are introduced into the academic fleet.

UNOLS Committee Reports (continued):

Research Vessel Technical Enhancement Committee (RVTEC) - The 1998 RVTEC Annual meeting will be coupled with an International Marine Technician symposium, INMARTECH '98, and will be held in La Jolla, CA on 19-22 October. It will be hosted by the Shipboard Technical Support group at Scripps Institution of Oceanography. RVTEC will meet on the first day followed by INMARTECH '98. A full agenda of technical workshops is planned. INMARTECH '98 will also include a ship tour of MELVILLE and equipment demonstrations.

In other activities, RVTEC has been involved with the USCG in planning for science systems testing on HEALY. Nine different technical support groups are involved in the planning process. Four legs are planned during the ship's test period and will include warm water testing, testing during the ship's transit, as well as in-ice testing. Berths will be made available for the science testing groups.

A discussion followed the RVTEC report suggesting that the community is not aware of what shared use equipment is available on the different ships. This information is posted on the UNOLS/RVTEC web site but needs better advertisement. It was suggested that the scheduling guidelines should be expanded to include how and where to get the information on shared use equipment and that this document be a "one stop shopping" for

investigators, informing them on how the scheduling system works as well as what is available on the ships. ***Development of a white paper was recommended.***

DEep Submergence Science Committee (DESSC) - Patty Fryer is the incoming chair to the DESSC and will be replacing Mike Perfit. ATLANTIS is operating and has a full schedule for this year and next. There is vehicle demand for work in the East Pacific Rise, Juan de Fuca and Southern East Pacific Rise. NURP has requested time for their Gulf of Alaska initiative. There is still an issue of when the ROV program (VanDover/Fornari) in the Indian Ocean can be accommodated. Patty Fryer will attend an international conference, MOMAR, in the fall to discuss the establishment of observatories on the Mid-Atlantic Ridge.

SEACLIFF has been delivered to WHOI. An engineering study has been funded to look at ways to best use SEACLIFF. WHOI has drafted an archiving policy and its review is in progress.

It was suggested that the Third Party Tool policy adopted by DESSC and the NDSF operator can be used as a template for the entire UNOLS community for handling specialized equipment. A workshop is being planned for this winter to get community input in addressing future directions and facility needs for deep submergence science.

NSF Academic Research Fleet Review - Don Heinrichs provided an update on the NSF Fleet Review. His viewgraphs are included as ***Appendix V.*** The Committee, headed by Dr. Roland Schmitt, has met twice so far. The first meeting, which was held in June at NSF, was primarily for providing background information of UNOLS and NSF programs associated with the Fleet. The second meeting was held in September at Scripps Institution of Oceanography. The committee visited ATLANTIS and REVELLE and received briefings on science drivers including future trends. They also heard reports from alternative ship operation groups such as NOAA, OPP, NAVO, the Canadian Coast Guard and the UK NERC program. A third meeting is scheduled at the University of Rhode Island on 2-3 December. Bill Humphreys, a consultant hired by NSF, will provide a financial report to the committee at the meeting. Most of this meeting will be a closed session to begin writing of the report.

As part of the NSF Review Study, NSF solicited letters from ship users asking how they perceived the fleet. Don gave a summary of this survey. Fifty responses have been received to date. Most of the letters were favorable and expressed that the fleet is in a reasonably good state and an effective system. Some problems were cited such as the need for more technical support, more equipment upgrades and too many scheduling scenarios. There were comments on the need to start the replacement of intermediate ships. Don will continue to update the survey as new letters arrive.

Don reviewed viewgraphs that were shown at the Fleet Review Meeting, which provided fleet utilization figures. He noted that NSF considers optimal ship utilization at 300 operating days for large ships, while UNOLS/RVOC considers optimal utilization at 275

operating days for large ships. Using the NSF figures for optimal utilization, the large ships are showing a half-ship less than optimal utilization, while the intermediate ships are showing two ships less than optimal utilization.

The Fleet review committee is expected to have their report drafted by early 1999.

Lastly, Don provided a handout which shows proposal award and success rate data for the four large disciplinary programs are in the NSF Ocean Sciences Research Section - Physical Oceanography, Biological Oceanography, Marine Geology and Geophysics, and Chemical Oceanography (see ***Appendix VI***). Collectively, these programs represent approximately 85% of the research funds in the division.

SEA CLIFF and ATV Report - Dick Pittenger reported that SEA CLIFF was turned over to ONR on 22 June. His viewgraphs are included as ***Appendix VII.*** SEA CLIFF arrived at WHOI on 5 August 1998 and is presently in storage at Otis AFB on Cape Cod. The current plan is to develop a lay up maintenance program and arrange for long term storage. WHOI will work to obtain the manipulators, replacement trim systems, spare parts, and maintenance and engineering records from the Navy. An engineering study has been approved and funded. The study will look at the integration of SEA CLIFF and ALVIN systems into a 6,000m submersible. Design concepts and cost projections will be developed.

The Navy has decided to have **ATV** remain in San Diego with SUBDEVGRU-5. After the FY99 2nd quarter (March), the SUBDEVGRU will be responsible for the vehicle's operation and support. In the past, the science users of ATV were only required to pay for the support ship consumables, which was approximately $5K per day. Under the new scenario, the user would be required to pay for both the ATV operational costs, per day plus ship costs.

Ship Scheduling Process - There have been concerns that the ship scheduling process is not as responsive as it should be. Don Moller and the SSC developed procedural changes to address the problem. The recommendations included a more efficient scheduling meeting process. The procedure calls for an elimination of the initial publishing of schedules but that letters of intent listing potential cruises be substituted for a formal schedule. These letters of intent will be provided in May of the scheduling year and offered wide distribution. The letters would include all programs planned for a particular ship for the coming year. They should include the area of operation, funding agency, and number of ship days; however, the order of cruises and how they might fit on a schedule need not be presented. The purpose of this letter of intent is to identify double bookings and early conflicts as well as provide an inventory of potential cruises to ensure all programs have been accounted for. The traditional June scheduling Review Group meeting will not be held. As funding decisions become known in June, schedules would be prepared and ready for review near the end of the month. A full scheduling meeting would be held in early July to review all schedules and address conflicts. The Scheduling Review Group would meet immediately after the scheduling meeting. Institutions would

be encouraged to coordinate with ship operators where efficiencies could be realized during the remainder of July and August. Large ship operators would be required to coordinate their schedules probably through electronic or conference call methods. In September, the Scheduling Review Group would meet again to finalize schedules. If contentious issues existed the affected ship schedulers would be invited to this meeting to assist in the resolution of the problems. This process will be tried next year for planning 2000 fleet operations after which a decision will be made as to whether it will be a permanent change.

On-Line Ship Scheduling Improvements - Jack Bash reported on the on-line ship scheduling improvements. The Two-Section Ship Time Request Form is on-line. It will soon be linked to a world chart that will archive each request. Clicking on a block at the geographic location where the work is to be performed can then access the requests. Further, a ship scheduling web format is under construction. This form, when submitted will develop cruise tracks that are displayed on a world chart. All of these changes are scheduled to come on-line in the next six months.

Science Mission Requirement (SMRs) - The SMRs were addressed during the FIC committee report.

UNOLS/NMFS Memorandum of Agreement - It was suggested that the UNOLS/NOAA transition team contact NOAA/NMFS to establish a Memorandum of Agreement (MOA) between UNOLS and NMFS. This MOA could be modeled after the MOA between UNOLS and NOAA/OAR.

AGOR 26 Update - Sujata Millick provided an update of the AGOR 26 design and construction project. Lockheed Martin is working on the design for the SWATH, AGOR 26. The present configuration is 182 ft LOA and 88 ft beam, with a draft of approximately 25-ft. The design team is presently conducting propulsion trade-off studies. The initial cost estimate from Ingalls for construction of the ship is approximately $52M, which significantly exceeds the funds available. Lockheed Martin will be going out to additional builder yards for more estimates.

Interchangability of Ships - The Council had an open discussion on the process to gain access to ships and whether or not ships should become more specialized or similar. No conclusions were reached concerning specialization; however, several council members felt the access to ships was a mystery to new investigators. More effort is needed to inform investigators of the options available and the procedure to get into the scheduling process. An ad hoc committee of Dennis Hansell, Barbara Prezelin and Tom Royer was appointed. Sandy Shor also offered to provide input. Jack Bash will draft a white paper on the topic and route it through the committee.

CORE/UNOLS MOA - A revision to the CORE/UNOLS MOA was recommended to better facilitate communications between the two organizations. The revision included adding a sentence to the third paragraph of the existing MOA. The new paragraph will

read: "We agree to communicate freely, appraising each organization of issues of mutual interest. *Specifically, we agree to hold working level discussions at least twice yearly to exchange information.* To further enhance this communication, UNOLS extends an invitation to CORE to attend all Annual, Council and Committee meetings. In addition, UNOLS will provide CORE with the minutes of these meetings. CORE invites a UNOLS liaison to the CORE Board when such meetings involve issues of interest to UNOLS." The Council agreed to this MOA change.

Post Cruise Assessment Follow-up - The usefulness of the summary report for the post cruise assessments came under discussion. The UNOLS Office has in the past provided a one-page summary of all assessment reports received for the year. The report has not been received well by the ship operators and its value has been questioned. Jack Bash reported that it took 2-3 weeks of his time to put the report together. After discussion, it was suggested that the statistics from the report, such as science days lost on the cruises, are of significant value, however, the summary of comments was not worth the effort. Jack was instructed to continue with the statistical part of the report and to give a verbal report to the Council each year at the fall meeting.

RVOC Safety Video - The Safety video was reported on during the RVOC committee report. The Council recommended that it be widely publicized. It should be reported on in the UNOLS Newsletter, and referenced in the white paper on access to the fleet, and on the UNOLS web page.

New Ship Construction - The shipyard has been selected for construction of Skidaway's new ship, SAVANNAH. The ship should be ready for operation in 2000 and will replace BLUE FIN. The design has been selected for the CALANUS replacement. Model tests have been completed and the final design should be completed by the end of September. A bid package for construction of this ship is expected out in October. Florida Institute of Oceanography has plans for the replacement of SUN COASTER. The University of Connecticut will soon complete construction of their new research vessel, RV CONNECTICUT. BLUE HERON, at the University of Minnesota, Duluth has been operating successfully and may apply to be a UNOLS vessel.

UNOLS Brochure - Vicky Cullen has been funded to publish a revised edition of the UNOLS brochure. The UNOLS Office will be working with Vicky on the update.

UNOLS Council Membership - Dennis Hansell, Chair of the nominating committee, described the process for arriving at this year's Council slate. His presentation is included as ***Appendix VIII.*** The process included a Newsletter article, advertisement on ScienceNet and in EOS, letters to the institutional representatives and deans/directors of UNOLS institutions, a second letter to representatives, and direct recruitment by telephone and e-mail. This aggressive campaign provided numerous candidates for Council members but only one candidate each for the UNOLS Chair and Vice Chair positions. Dennis presented the slate of candidates. A special at-large slate has also been established in the event that Bob Knox gets elected as Chair (and must vacate his present

seat on the Council). Ken Johnson thanked Dennis and the nominating committee on their efforts in establishing the 1998 slate.

The Council discussed the election process to be held at the Annual meeting on 17 September. They agreed to vote on the UNOLS Charter Revision prior to holding the Council elections. If the Charter revisions are adopted, the elections will be held in accordance with the revised Charter. It was also noted that the applications for membership from the New Jersey Marine Sciences Consortium and the Southern California Marine Institute would be mute if the Charter revisions are adopted.

UNOLS Office Transfer - Jack Bash reported that letters of solicitation for a new UNOLS Office host would be sent to the UNOLS operator institutions. They will have approximately two months to submit letters of intent. After the letters of intent are received, a selection committee will be assembled. In early 1999, all proposals for the UNOLS office must be submitted. The committee will review the applications and send their recommendation to the Council, which in turn will go before the UNOLS membership.

Outgoing Council Members - Thanks was given to outgoing Council members Ken Johnson (Chair), Bob Wall, Dick Pittenger and Committee chairs Mike Perfit (DESSC) and Don Moller (SSC) for all their contributions to UNOLS over the years.

Adjournment - The meeting was adjourned at 1700.

APPENDIX I

Revised 9/10/98

UNOLS COUNCIL MEETING
8:30 a.m., Wednesday, September 16, 1998
National Science Foundation, Room 1235
4201 Wilson Boulevard
Arlington, VA

Call the Meeting: Ken Johnson, UNOLS Chair, will call the meeting to order at 8:30 a.m., September 16, 1998.

Accept Minutes of the July, 1998 Council Meeting.

COMMITTEE REPORTS: Ken Johnson will provide a brief summary of the UNOLS Committee written reports and open the floor to a question/answer period. (Prior to the meeting, Committee Chairs submitted written reports for distribution to meeting participants.) Chairs will identify any important issues that need to be addressed further by the Council.

Round Table Discussion with Agency Program Managers - Agency Science Program Managers are invited to discuss ship needs, projections and fleet issues. Please note, reports from agency representatives and CORE are scheduled for the Annual Meeting.

UNOLS ISSUES:

NSF Academic Research Fleet Review - Don Heinrichs will provide a report on the September 1-3 NSF Fleet Review Meeting and plans for the follow-on meeting(s).

Ship Scheduling Process - Don Moller will review proposed revisions to the scheduling process and discuss feedback received from the community.

Science Mission Requirements (SMR) - Larry Atkinson will review the status of SMR development for an East Coast Research Vessel and a vessel for work in Alaskan waters.

AGOR 26 Construction Update - Sujata Millick will provide an update on the Navy's construction of AGOR 26, SWATH research vessel. A full presentation by Robert Hinton on this topic will be provided at the Annual Meeting.

Interchangability of Ships - Ships in similar size classes are becoming more specialized in capabilities and training. Discuss plans for development of a white paper to educate PIs on the fleet capabilities and scheduling process.

CORE/UNOLS MOA - Status of proposed revisions to the CORE/UNOLS MOA.

Post Cruise Assessment Follow-up - At the last Council meeting there was discussion on Post Cruise Assessments. Procedures for follow-up and feedback to the assessments will be discussed further.

RVOC Safety Video - Paul Ljunggren will report on the recently released RVOC Safety Video.

SEA CLIFF and ATV Report - Dick Pittenger will review the status of DSV SEA CLIFF. Sujata Millick will provide a brief update on ATV.

Ship Scheduling Improvements - Jack Bash will report on the progress of the improvements to the UNOLS ship scheduling process.

New Ship Construction - Update on Skidaway's construction of R/V SAVANNAH. Update on plans for replacement of CALANUS.

UNOLS Council Membership - Dennis Hansell, Nominating Committee Chair, will present the 1998 UNOLS Council Slate. The terms of Ken Johnson, Tom Royer, Dick Pittenger and Bob Wall are expiring.

UNOLS Brochure - Update on plans for updating the UNOLS brochure.

Old Business: The following issues were addressed at the last meeting. They are open for any additional discussion.

UNOLS Office Transfer - The current UNOLS Office grant with the University of Rhode Island will expire on 30 April, 2000.

UNOLS Charter Review - The recommended revisions to the UNOLS Charter and structure will be presented for vote at the Annual Meeting.

Calendar for UNOLS Meetings:

MEETING	LOCATION	DATES
Ship Scheduling Committee	Arlington, VA	14 September 1998
Scheduling Review	Arlington, VA	15 September 1998
UNOLS Council	Arlington, VA	16 September 1998
UNOLS Annual	Arlington, VA	17 September 1998
RVTEC	La Jolla, CA	19 October 1998
INMARTECH '98	La Jolla, CA	20-22 October 1998
RVOC	Honolulu, HI	4-6 November 1998
AICC	Arlington, VA	18-20 November 1998
FIC	TBD	Fall, 1998
DESSC	San Francisco, CA	5 December 1997

Adjournment

APPENDIX II

Council Meeting - September 16, 1998

NAME	AFFILIATION	PHONE/FAX/INTERNET ADDRESS
Jon Alberts	WHOI	(508) 289-2277/(508) 457-2185/jalberts@whoi.edu
James Allan	NSF/OCE/ODP	(703) 306-1581/jallan@nsf.gov
Tim Askew	HBOI	(561) 465-2400x262/(561) 465-2116/taskew@hboi.edu
Larry Atkinson	ODU	(757) 683-4926/(757) 683-5550/atkinson@ccpo.odu.edu
John Bash	UNOLS	(401) 874-6825/(401) 874-6167/unols@ gso.uri.edu
Katie Bowler	NSF/OCE	(703) 306-1580/cbowler@nsf.gov
Gary Bulmer	NOAA/NC	(301) 713-3418x182/gary.p.bulmer@noaa.gov
Elizabeth Clark	NOAA/NMFS	(301-713-2363/Elizabeth.Clarke@noaa.gov
Kendra Daly	NSF	(703)306-1587/((703)306-0390/kdaly@nsf.gov
J. Paul Dauphin	NSF/ODP	(703) 306-1581/jdauphin@nsf.gov
Patrick Dennis	ONR/096/CORE	(703) 696-2161/dennisp@onr.navy.mil
Annette DeSilva	UNOLS	(401) 874-6825/(401) 874-6167/unols@gso.uri.edu
George DuPree	USCG	(202) 267-1456/(202) 267-4222/gdupree@comdt.uscg.mil
Jim Eckman	ONR/BIO	eckmanj@onr.navy.mil
David Epp	NSF	(703) 306-1586/depp@nsf.gov
Ron Ferek	ONR	(703) 696-0518/(703) 696-3390/ferekr@onr.navy.mil
John Freitag	URI	(401) 874-6579/(401) 874-6578/jfreitag@gso.uri.edu
Dave Garrison	NSF/BIO	garrison@nsf.gov
Lou Goodman	ONR	goodmanl@onr.navy.mil
Dennis Hansell	BBSR	(441) 297-1880x210/(441) 297-8143/dennis@bbsr.edu
Don Heinrichs	NSF	(703) 306-1576/(703) 306-0390/heinric@nsf.gov
Ken Johnson	MLML	(408) 755-8657/(408) 753-2826/johnson@mlml.clastate.edu
Tom Kinder	ONR	(703) 696-1206/kindert@onr.navy.mil
Bob Knox	SIO/UCSD	(619) 534-4729/(619) 535-1817/rknox@ucsd.edu
Paul Ljunggren	LDEO	(914) 365-8845/(914) 359-6817/pwl@ldeo.columbia.edu
Scott McKellar	NOAA/NC	(301) 713-3435x135/scott.mckellar@noaa.gov

Sujata Millick	ONR	(703) 696-4530/(703) 696-2007/millics@onr.navy.mil
Don Moller	WHOI	(508) 289-2277/(508) 457-2185/dmoller@whoi.edu
RADM Brad Mooney	Consultant	(703) 415-4535/(703) 415-4535/jbradmooney@erols.com
Mike Perfit	U of Miami	(352) 392-2128/(352) 392-9294/perfit@geology.ufl.edu
Tim Pfeiffer	U of Delaware	(302) 645-4341/pfeiffer@udel.edu
Steve Piotrowicz	NOAA/OAR/ERL	(301) 713-2465x124/(301) 713-0158/steve.piotrowicz@noaa.gov
Dick Pittenger	WHOI	(508) 289-2597/(508) 457-2185/rpittenger@whoi.edu
Dave Powell	U of Miami/RSMAS	(305) 361-4832/(305) 361-4174/dpowell@rsmas.miami.edu
Barbara Prezelin	UCSB	(805) 893-2879/(803) 893-4319/barbara@icess.ucsb.edu
Mike Prince	MLML	(831) 633-3534/(831) 633-4580/prince@milm.calstate.edu
Mike Purdy	NSF/OCE	(703) 306-1580/mpurdy@nsf.gov
Lisa Rom	NSF/OCE/OTIC	(703) 306-1582/(703) 306-0390/erom@nsf.gov
Tom Royer	ODU	(757) 683-5547/(757) 683-5550/royer@ccpo.odu.edu
Connie Sancetta	NSF/OCE/MGG	(703) 306-1586/csancett@nsf.gov
Daniel Schwartz	U of Washington	(206) 543-5062/(206) 543-6073/schwartz@ocean.washington.edu
Tom Shipley	U of Texas	(512) 471-0320/tom@utig.ig.utexas.edu
Alexander Shor	NSF	(703) 306-1585/(703) 306-0390/ashor@nsf.gov
James Swift	SIO	(619) 534-3387/(619) 534-7383/jswift@ucsd.edu
Brian Taylor	SOEST/U of Hawaii	(808) 956-6649/(808) 956-3723/taylor@soest.hawaii.edu
CDR Scott Tilden	ONR/321B/LWAD	(703) 696-8698/tilden@onr.navy.mil
Joe Ustach	Duke	(252) 504-7575/(252) 504-7651/joeu@dumcoc.ml.duke.edu
Robert Wall	U of Maine	(207) 799-7734

APPENDIX III

UNOLS Council Meeting
September 16, 1998

Committee Reports

Arctic Icebreaker Coordinating Committee
Fleet Improvement Committee
Research Vessel Technical Enhancement Committee
Research Vessel Operators' Committee
Deep Submergence Science Committee

Report from the Chair of the UNOLS Arctic Icebreaker Coordinating Committee to the UNOLS Council - September 1998

The UNOLS Arctic Icebreaker Coordinating Committee (AICC) provides scientific oversight of Arctic marine science support on US vessels, with primary focus on USCGC Polar Star, USCGC Polar Sea, and the new USCGC HEALY. The AICC held its most recent meeting 21-22 January 1998 in New Orleans, Louisiana. The next meeting will be 18-20 November 1998 at NSF headquarters in Arlington, VA. Interim business has been handled via e-mail, and AICC representatives have attended other meetings related to AICC business.

Construction progress on USCGC HEALY at the Avondale shipyard has been steady. Unofficial estimates are that delivery to the Coast Guard for their testing will be delayed by approximately six months due to the complexity of the vessel, its "first of type" status, and a severe shortage of skilled shipyard labor in Louisiana. There are no reports to the AICC of the sort of major problems that might bring construction to a halt.

The HEALY science systems testing program is being undertaken by a broad-based consortium of US oceanographic technical support groups coordinated by UNOLS RVTEC, working with a group assembled by NAVSEA and the Coast Guard. A positive, cooperative atmosphere is evident at meetings of the test group, and progress on the test plans is excellent.

Following a period of warm water tests by the yard, NAVSEA, and the Coast Guard, the HEALY's first ice contact could come approximately November 1999. Intense post-delivery testing may begin approximately February 2000, and may be completed by approximately July 2000. The AICC expects that there will be no "science of opportunity" on USCGC HEALY during this testing phase, although oceanographic data resulting from the science systems testing program will be made widely available. It is reasonable to assume that following the test program a degree of refit, adjustment, and training may be necessary. The AICC Chair estimates that it is possible, but by no means assured, that during the latter part of 2000 the Coast Guard might accommodate some SOO activity from the HEALY.

Present plans call for the HEALY's availability for agency-funded Arctic marine science support - the vessel's primary mission - beginning approximately January 2001. Anticipating that the Western Arctic Shelf-Basin Initiative field program may be one of the HEALY's early science customers, the AICC plans to help coordinate that program's planned
ship and equipment needs with the Coast Guard so that the vessel and personnel are ready for the program, within the context of the HEALY's planned science systems support.

The 1998 US Coast Guard Arctic Science-of-Opportunity (SOO) program included science participation on cruises of both USCGC Polar Star and USCGC Polar Sea. A late spring - early summer cruise of the Polar Sea was accomplished within the intended framework of an advance announcement of opportunity followed by AICC assessment of proposals for logistics compatibility, at which point participant and chief scientist selection were carried out by the Coast Guard. An opportunity for a late summer 1998 Polar Star SOO cruise developed too late for an announcement of opportunity, and after some discussion with the AICC, it was agreed that the Coast Guard should handle all aspects of the cruise, i.e. without AICC assessments.

The AICC intends to continue its annual logistics assessment of Arctic Science-of-Opportunity cruises by USCG icebreakers. Arctic SOO cruises are likely on one or more Coast Guard icebreakers each year. Each cruise will be preceded by a wide call for letter proposals for participation. The AICC is charged with assessing these proposals for logistic and overall compatibility with the SOO mission. No decisions are made by the AICC with regard to participation, and AICC comments are specifically not to be used to leverage agency support for any proposal. While up until now everyone has been accommodated one way or the other, this situation will likely change beginning in 1999. The AICC continues to caution the community that science support is not necessarily the chief mission of SOO cruises, and the AICC reminds all that the Coast Guard is now accepting and will continue to accept ship-time requests for funded Arctic science missions on the Polar-class vessels and the HEALY. For example, a ship-time request form is available from the UNOLS web site. On funded science missions the expectation and goal is that science will be supported in a manner and devotion to mission similar to that supported by the operators of large UNOLS vessels.

The Coast Guard continues to send Marine Science Technicians (MSTs) on UNOLS vessels on an opportunistic basis. This valuable program helps to bring together Coast Guard marine technical support with that from UNOLS, and has sufficient momentum within the Coast Guard that it continues with little AICC involvement. The AICC continues to discuss with the Coast Guard various means to help ensure close ties with the UNOLS technical and scientific communities, and to model its relationships with user-scientists upon that carried out by UNOLS large ship operators.

The AICC intends to hold a meeting in spring 1999 in New Orleans, fit to the HEALY construction and testing schedule so that a grand tour of the completed vessel can be a central activity of the meeting. This meeting should provide a good opportunity for agency and community representatives to see the HEALY, and learn more about the AICC and future plans. Hence the AICC might solicit and expect larger- and broader-than-usual attendance at this meeting.

A major goal for the AICC during the coming months is to establish a mechanism for long-term Arctic expeditionary planning for the Coast Guard icebreakers that will provide an increasingly-likely (as each year draws nearer) temporal and regional palette of science missions, international programs, options, and requirements from which the Coast Guard and the funding agencies can draw annual operations, science, and funding scenarios. The success of UNOLS DESSC in similar regard will certainly provide a model for Arctic vessel use planning, probably including by 1999 an annual advance planning workshop held the same day - one day before the fall AGU meeting - as the DESSC long-term planning workshop.

Fleet Improvement Committee Report submitted by Larry Atkinson

The Fleet improvement Committee has had three main activities since July.

The Sub-committee to develop a Science Mission Requirement document for the replacement of the Alpha Helix has delivered a draft document that is in review at this time.

The Subcommittee to develop a Science Mission Requirement document for an East Coast ship is meeting later this month to finalized the draft.

Both drafts should be ready for the next council meeting.

FIC has also been involved in the U.Hawaii SWATH planning. Several FIC and UNOLS council members met on July 29, 1998 at the Lockheed/Martin Facility in Sunnyvale, CA to review the plans and left many important comments.

Research Vessel Operators' Committee Report
Submitted by Paul Ljunggren

The RVOC Meeting is scheduled for 4,5, 6 November to be hosted by the University of Hawaii in Honolulu, HI. The major presentations or topics for discuss include:

-Presentations on new R/V's and an update on plans for the new AGOR.

-Presentation by Jamestown Marine Services on the NSF Ship Inspection program.

-Maritime Advisory System was awarded the contract by UNOLS to provide medical advice to our vessels. This contract was effective 1 July 1998. MAS will make a presentation on their organization and the services they offer.

-ABS Marine Services is scheduled to make two presentations on the second day. They are:

1) STCW Awareness Training- Providing knowledge on the impact of the 1995 Amendments to the International Convention on the Training and Certification of Watchkeepers.

2) Provide an overview of the International Safety Management Code (ISM). What are the requirements? How do you obtain certification? How does this apply to research vessels? How do we go about implementing ISM?

The Safety Committee has been continuing to work on two projects. They are the RVOC Safety Video and completing a revision to the Research Vessel Safety Standards.

-The video has been completed, reviewed by the committee, and copies are being reproduced for distribution. The committee's intent is to distribute one master for archive to each institution, a copy for the institution's use and one for each ship. In addition a master will be provided to UNOLS along with several copies and a copy will be sent to NSF.

-The Safety Standard revisions have been received by the Tom Smith, Safety Committee Chair. A draft of these revisions will be sent for review by the RVOC. Some the changes to the RVSS include addressing changes in the regulations such as Global Maritime Distress and Safety System (GMDSS). In addition the chapter on Stability has been rewritten.

Committee report from RVTEC to UNOLS Council

While there have been no meetings since the summer UNOLS Council meeting in Rhode Island, there has been progress on some fronts.

The upcoming RVTEC/INMARTECH 98 meeting scheduled in La Jolla during the week of October 19th. The meeting will be hosted by the Marine Technical services group at Scripps Institution of Oceanography. To date all of the RVTEC meetings have involved primarily participants from UNOLS institutions, NSF, ONR, NOAA, NAVO and ASA. Last year representatives from the Polar operations group of the U.S. Coast Guard joined us. The 1998 meeting in La Jolla will involve participation from the international community. It is expected that there will be nearly 100 participants who will come from Japan, UK, Netherlands, Spain, South Africa and Australia. There have been 28 invitations to presenters for subjects ranging from Deck operations and Safety to Multibeam Sonar processing who will offer tutorial presentations in concurrent sessions during the 3-day meeting. The meeting will be interspersed with social and networking sessions beginning with a reception at the SIO Birch Aquarium facility. At this reception various poster sessions presented by academics and manufacturers will be hosted in an informal atmosphere with the understanding that it not be a sales presentation. The SIO group has worked very hard in their efforts to host a meeting accommodating the needs of both RVTEC and the international community. It is through the unflagging efforts of Annette DeSilva of UNOLS and Woody Sutherland, Technician group manager at SIO that this exciting program has moved forward.

The RVTEC group will meet on Monday, 19 October prior to the international to conduct business specific to our group. This will include election of officers and reappointment of sub-committee chairs. Committee reports from the Data Standards Sub-committee, Wire and Cable Sub-committee, On-line resources Sub-committee and the Long-Range Instrumentation Planning Sub-committee, will be heard at this time. The site of the RVTEC meeting for 1999 will also be chosen.

In other developments, RVTEC and the UNOLS Office have been continuing work with the US Coast Guard and the AICC in planning the scientific ice trial of the new Coast Guard icebreaker USCGC HEALY. There has been a great deal of progress both on the vessel itself and in the planning of the scientific ice trials planned to begin next year. A meeting was hosted at URI in August, which included the various groups participating in the HEALY trials as well as NAVSEA, Coast Guard and CREEL reps. The AICC was represented by Chair Dr. Jim Swift. Because it is clear that the Coast Guard is serious in making HEALY a first rate scientific platform for Arctic science operations, a great deal of value is being placed on the Science trials. It is anticipates that the science testing will occur in several phases, Multi-Beam Sonar installation and builders trial testing, warm water testing of science systems and finally full science systems and capability testing in Arctic conditions. It is anticipated that this phase of the operation will consist of scientific scenarios led by an AICC scientist who will plan and execute the testing sequences in a science cruise format. It is felt that this will allow a realistic testing sequence in which all major science system can be exploited and evaluated independently and as they interact with each other. The goal is to involve as many institutions in the testing program as possible in order to insure a broad spectrum of expertise in the final result.

The Coast Guard is continuing to look at a variation of the UNOLS model for technical staffing of the vessel considering both Coast Guard and civilian personnel possibly contracted to a UNOLS operating institution. Toward this end they have, at our invitation, sent Coast Guard Marine Science Technicians out on UNOLS vessel in order to become acquainted with UNOLS science operations and support practices.

Submitted,
John S. Freitag Chair, RVTEC

DESSC Information for UNOLS Council Meeting Sept. 16.

In June, the DESSC held its annual summer meeting at Woods Hole. . Dr. P. Fryer, from the University of Hawaii and a present DESSC member, was selected to be the next DESSC Chair and will replace .M. Perfit who has completed his three-year term. Two other members of the committee (Hugh Milburn and Carl Wirsen) rotated off the DESSC and nominations to replace them will be provided to K. Johnson and UNOLS.

Since the last UNOLS meeting, operations on the ATLANTIS have been going very well. ALVIN has had a number of successful dives in the N.E. Pacific. The ROVs were moved on to R/V THOMPSON for work on the Juan de Fuca Ridge after an ONR/JASON Foundation cruise in Guaymas. The vehicles are currently engaged in the very challenging "H20" experiment. JASON successfully located and cut the transoceanic cable on its first lowering and at last report the cable had been reterminated and tested on deck.

Some of the major and minor problems (e.g. modifications to main deck doors, crane upgrades, more robust capstan, more fume hoods) that were affecting the new ship have been addressed and the operator plans for additional upgrading ATLANTIS in the coming months (list of29 items). The operators and DESSC will work together to get input from the science community to prioritize these upgrades. A number of advances with imaging, mapping and navigation have been made with Jason. The WHOI operators have continued to work on upgrades to the vehicles such as data logging and navigation systems, video upgrades, scanning sonar, and a ring laser gyroscope that were funded through the federal agencies.

SEACLIFF has been decommissioned and transferred (with some support equipment) to WHOI in early August. The federal agencies have funded an engineering study to be undertaken by WHOI to assess the potential uses of SEACLIFF and costs involved. The results of this study will be made available to the federal agencies and DESSC.

WHOI and DESSC have drafted an "Archiving Policy" that documents the obligations WHOI and PI's have with regard to oceanographic data and samples, as well as visual and digital information obtained using the vehicles and sensors of the National Deep Submergence Facility. DESSC hopes to have the policy approved by the federal agencies and in place in the near future.

Scheduling for ALVIN and the ROV's is nearly complete and the '99 schedule is entirely booked for ALVIN. There is again a good deal of proposal pressure for the traditional "yo-yo" regions (JdF-N EPR) but more cruises are being planned for the S. EPR, Mediterranean, and the northern Atlantic. The DESSC has had some success in developing global deep submergence initiatives and encourages proposals for the SW Pacific and Indian Ocean that could lead to field programs as early as 2000. Patty Fryer will be attending the MOMAR meeting in Portugal in October to give DESSC's perspective on long term monitoring the Mid Atlantic Ridge.

APPENDIX IV

Charge/Operating Days
(1995-1996-1997-1998-1999)

	1995 Total	1996 Total	1997 Total	1998 Total	1999 Proj't
A-II / Atlantis	319	93 *	185 *	273 *	339
Ewing	310	315	273	245 *	323
Knorr	350	279	284	265	0 *
Melville	297	297	308	216 *	252
Revelle		80 *	288	316	277
Thompson	333	246	214	277	272
Edwin Link	175 *	186	214	141	79
Endeavor	228	147	201	158 *	234
Gyre	122	219	184	121	111
Moana Wave	195	144	202	169	170
New Horizon	240	174 *	259	241	191
Oceanus	187	168	209	236	195
Seward Johnson	271	304	284	265	213
Wecoma	145	198	199	226	174
Alpha Helix	144	73	118	172	135
Cape Hatteras	175	0	221	205	151
Cape Henlopen	198	185	206	195	186
Longhorn	72	130	46	63	49
Pelican	182	201	206	231	231
Pt. Sur	164	118 *	188	193	184
Sea Diver	180	132	105 *	133	48
Sproul	145	155	182	157	137
Weatherbird	154	167	151	132	136
Days	4586	4011	4733	4646	4087
Barnes	77	86	126	119	110
Bluefin	75	96	82	95	136
Calanus	48	50	111	174	138
Laurentian	91	72	44	148	215
Urraca	0	0	0	173	109
Grand Total Days	4877	4315	5096	5355	4795

* Overhaul or partial service

Note: Based on data available on 11 Sept. '98

9/16/98 - DAM

LARGE SHIP CHARGE DAYS

(by Agency & Year)

		1995	1996	1997	1998	1999
NSF	**Days**	1371	1124	1018	920	814
	%	85.2	85.8	65.6	57.8	55.4
ONR	**Days**	84	20	88	53	166
	%	5.2	1.5	5.7	3.3	11.3
NOAA	**Days**	20	25	89	49	182
	%	1.2	1.9	5.7	3.1	12.4
NAVO	**Days**	0	0	184	212	252
	%	0	0	11.8	13.3	17.2
OTHER	**Days**	134	141	173	358	49
	%	8.3	10.8	11.2	22.5	3.5
TOTAL	**Days**	1609	1310	1552	1592	1463

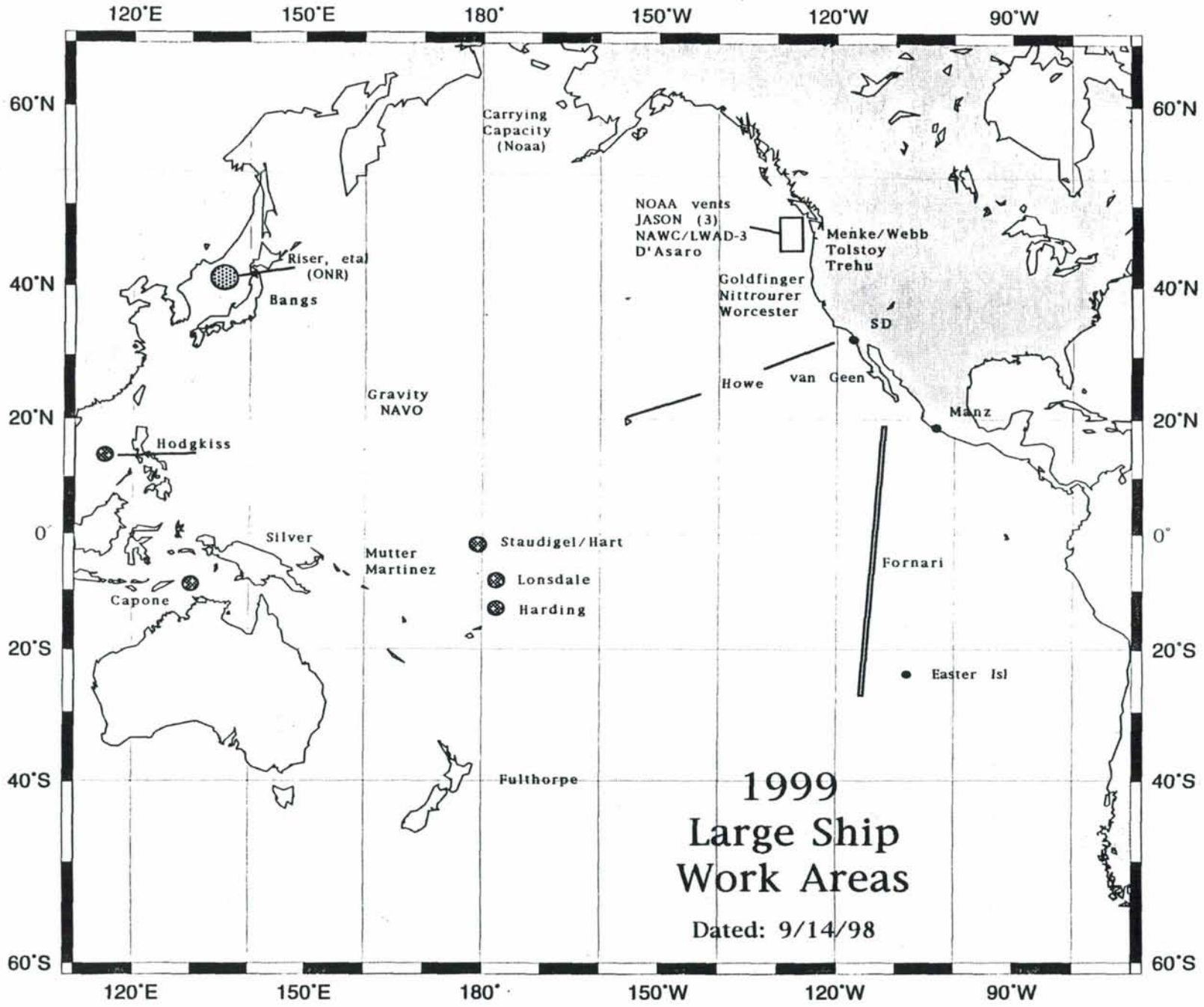
9/16/98 - DAM

UNOLS FLEET CHARGE DAYS

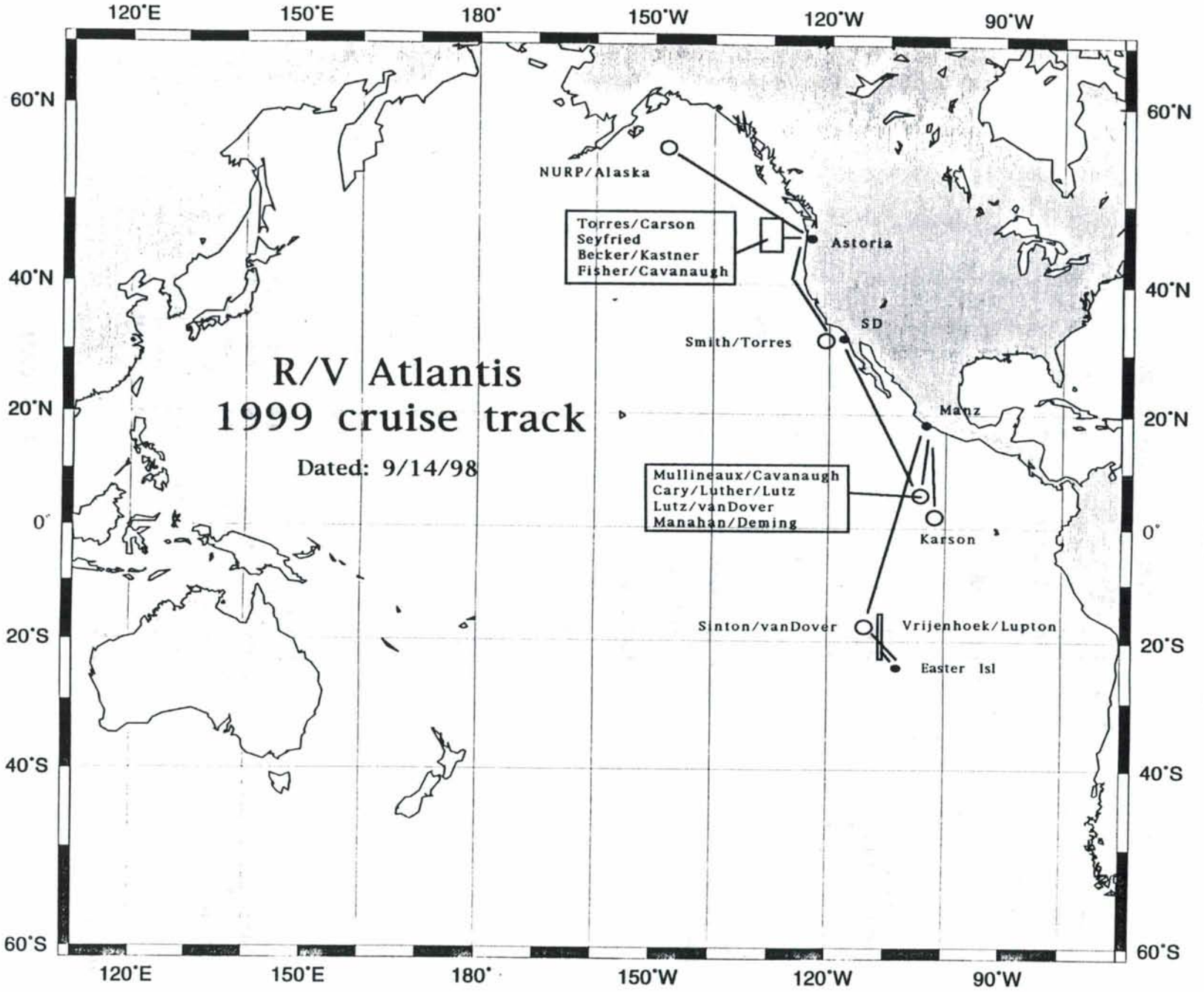
(by Agency & Year)

		1995	1996	1997	1998	1999
NSF	**Days**	3249	2738	2909	2670	2409
	%	66.6	63.5	57.1	49.9	50.2
ONR	**Days**	403	454	499	430	652
	%	8.3	10.5	9.8	8.0	13.6
NOAA	**Days**	354	145	378	612	446
	%	7.3	3.4	7.4	11.6	9.3
NAVO	**Days**	0	0	373	468	474
	%	0	0	7.3	8.7	9.9
OTHER	**Days**	872	978	937	1166	814
	%	17.9	22.6	18.4	21.8	17.0
TOTAL	**Days**	4877	4315	5096	5355	4795

9/16/98 - DAM


120°E
150°E
180°
150°W
120°W
90°W
60°N
40°N
20°N
0°
20°S
40°S
60°S
Carrying Capacity (Noaa)
NOAA vents
JASON (3)
NAWC/LWAD-3
D'Asaro
Menke/Webb
Tolstoy
Trehu
Goldfinger
Nittrourer
Worcester
SD
Howe
van Geen
Manz
Riser, etal (ONR)
Bangs
Gravity NAVO
Hodgkiss
Silver
Mutter
Martinez
Staudigel/Hart
Lonsdale
Harding
Capone
Fornari
Easter Isl
Fulthorpe
1999
Large Ship
Work Areas
Dated: 9/14/98

WHOI / Moller


120°E
150°E
180°
150°W
120°W
90°W
60°N
40°N
20°N
0°
20°S
40°S
60°S
NURP/Alaska
Torres/Carson
Seyfried
Becker/Kastner
Fisher/Cavanaugh
Astoria
SD
Smith/Torres
Manz
Mullineaux/Cavanaugh
Cary/Luther/Lutz
Lutz/vanDover
Manahan/Deming
Karson
Sinton/vanDover
Vrijenhoek/Lupton
Easter Isl
R/V Atlantis
1999 cruise track
Dated: 9/14/98

WHOI / Moller

1999 and BEYOND
FUNDED *Alvin* & ROV DIVE PROGRAMS
(Sorted by Dive Site)

Year	Program	Agency	Vehicle(s)	Days on Sta.	
			Southern EPR		
1999	**Lupton,etal (F)**	NURP	*Alvin*	**10**	(begin 1998)
1999	**Vrijenhoek (F)**	NSF	*Alvin*	**14**	(begin 1998)
1999	**Sinton (F)**	NSF	*Alvin* & DSL-120	**25**	
1999	**vanDover (F)**	NSF	*Alvin*	**3**	
			9 North. EPR		
1999	**Luther (F)**	NSF	*Alvin*	**8**	(LEXEN)
1999	**Cary (F)**	NSF	*Alvin*	**4**	*
1999	**Lutz (F)**	NSF	*Alvin*	**20**	*
1999	**Manahan (F)**	NSF	*Alvin*	**8**	*
1999	**Mullineaux (F)**	NSF	*Alvin*	**10**	*
1999	**vanDover (F)**	NSF	*Alvin*	**3**	
1999	**Cavanaugh (F)**	NURP	*Alvin*	**3**	
2000	**Lutz (F)**	NSF	*Alvin* & Jason	**23**	*
2000	**Manahan (F)**	NSF	*Alvin*	**8**	*
2000	**Luther (F)**	NSF	*Alvin*	**8**	* (LEXEN)
			California Coast		
1999	**Smith/Torres (F)**	NURP	*Alvin*	**15**	*
1999	Eng'r Dives	3 agency	*Alvin* & Jason	3	
			Juan de Fuca		
1999	**Becker (F)**	NSF	*Alvin*	**7**	*
1999	**Carson,B (F)**	NSF	*Alvin*	**4**	*
1999	**Cavanaugh (F)**	NURP	*Alvin*	**3**	
1999	**Deming (F)**	NSF	*Alvin*	**5**	
1999	**Fisher (F)**	NSF	*Alvin*	**10**	*
1999	**Kastner (F)**	NSF	*Alvin*	**5**	*
1999	**Seyfried (F)**	NSF	*Alvin*	**4**	
1999	**Torres,M (F)**	NSF	*Alvin*	**12**	
1999	**Chadwick (F)**	NSF	Jason	**6**	*
1999	**Cowen (F)**	NSF	Jason	**10**	* (LEXEN)
1999	**Embley (F)**	NURP	Jason	**20**	
2000	**Carson,B (F)**	NSF	*Alvin*	**3**	*
2000	**Kastner (F)**	NSF	*Alvin*	**5**	
			Other Regions		
1999	**Fornari (F)**	NSF	DSL-120	**28**	(20N-25S,EPR)
1999	**Fornari/vDover (F)**	NSF	DSL-120 & Jason	**20**	(Indian Ocean)
1999	**Karson (F)**	NSF	*Alvin* & ARGO+120	**24**	(Hess Deep)
1999	**NURP/Alaska (F)**	NURP	*Alvin*	**21**	(G of Alaska)
2000	**Blackman (F)**	NSF	*Alvin*,Jason,DSL-120	**25**	(MAR,30N)
2000	**Garcia (F)**	NSF	Alvin	**12**	(Hawaii)
2000	**MacDonald (F)**	MMS	*Alvin* or Jason	**10**	(G of Mexico)

*** indicates 2nd or 3rd year of Time Series**

9/16/98 - DAM

APPENDIX V

Academic Research Fleet Operations and Management Review

Terms of Reference

3) Provide recommended actions by NSF to improve the organization, management, and cost effective operation of the Academic Research Fleet in support of scientific capabilities required to maintain world leadership in ocean and environmental science research.

   The recommendations should be formulated in the context of the results of the review and evaluations of the first two terms of reference. Key elements include providing a perspective on Academic Research Fleet operations within a national context, relevance and quality of scientific, educational, and technical support; and benefits and added value of any recommended actions for peer reviewed competition or recompetition of research fleet components.

Academic Research Fleet Operations and Management Review

Terms of Reference

2) Review and evaluate overall management structure of the Academic Research Fleet; review and evaluate existing capabilities and services provided by the operating organizations; and review and evaluate possible future changes in academic fleet operations to ensure optimal operations of the academic fleet to support research requirements.

The review context should include consideration of the distributed ownership of the fleet, cost sharing for both capital acquisition and operations and requirements of multiple research sponsors who participate in scientific, operational and financial support.

Specific issues include:

- Are organizational arrangements and structures appropriate?
- Can the Academic Research Fleet system be managed in a more cost-effective manner?
- Should elements of the research fleet be recompeted?

Academic Research Fleet Operations and Management Review

Terms of Reference

1) Review and evaluate the current and projected research vessel fleet required for research sponsored by the National Science Foundation within a national framework that includes research requirements of other federal agencies, state and local governments, and private sources.

   This review should be done in the context of environmental and geoscience research, in general, and the specific contributions the Academic Research Fleet provides to the research enterprise as a whole.

   Specific issues include:

   - Do the capabilities and operating modes of the academic ships meet research requirements?
   - Are the number of ships overall, and distribution within size categories, consistent with the level of research support and type of seagoing research projects expected in the future?
   - Are specialized capabilities required to meet research priorities adequately included in the overall fleet profile?

Academic Research Fleet Operations and Management Review

Action

- Establish Academic Research Fleet Operations Review Panel
  - Six to eight members
  - Academic, industry, and government representatives

- Provide a comprehensive and balanced evaluation of science support services and capabilities, ship operations, and size and organizational structure for the support of the academic research fleet.

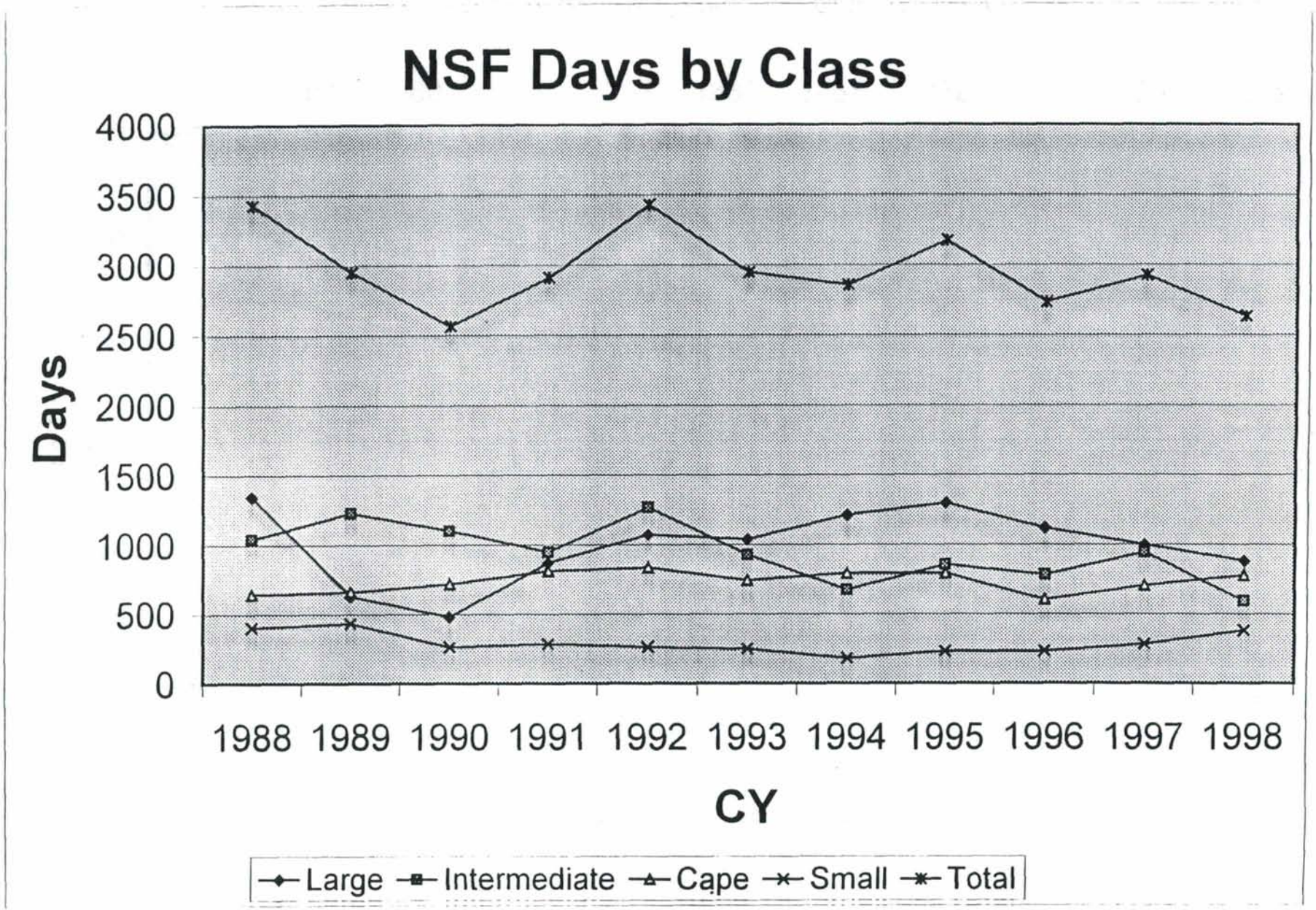
- Recommend actions by NSF to ensure the most cost-effective means of organizing and managing the research fleet for support of research requirements.

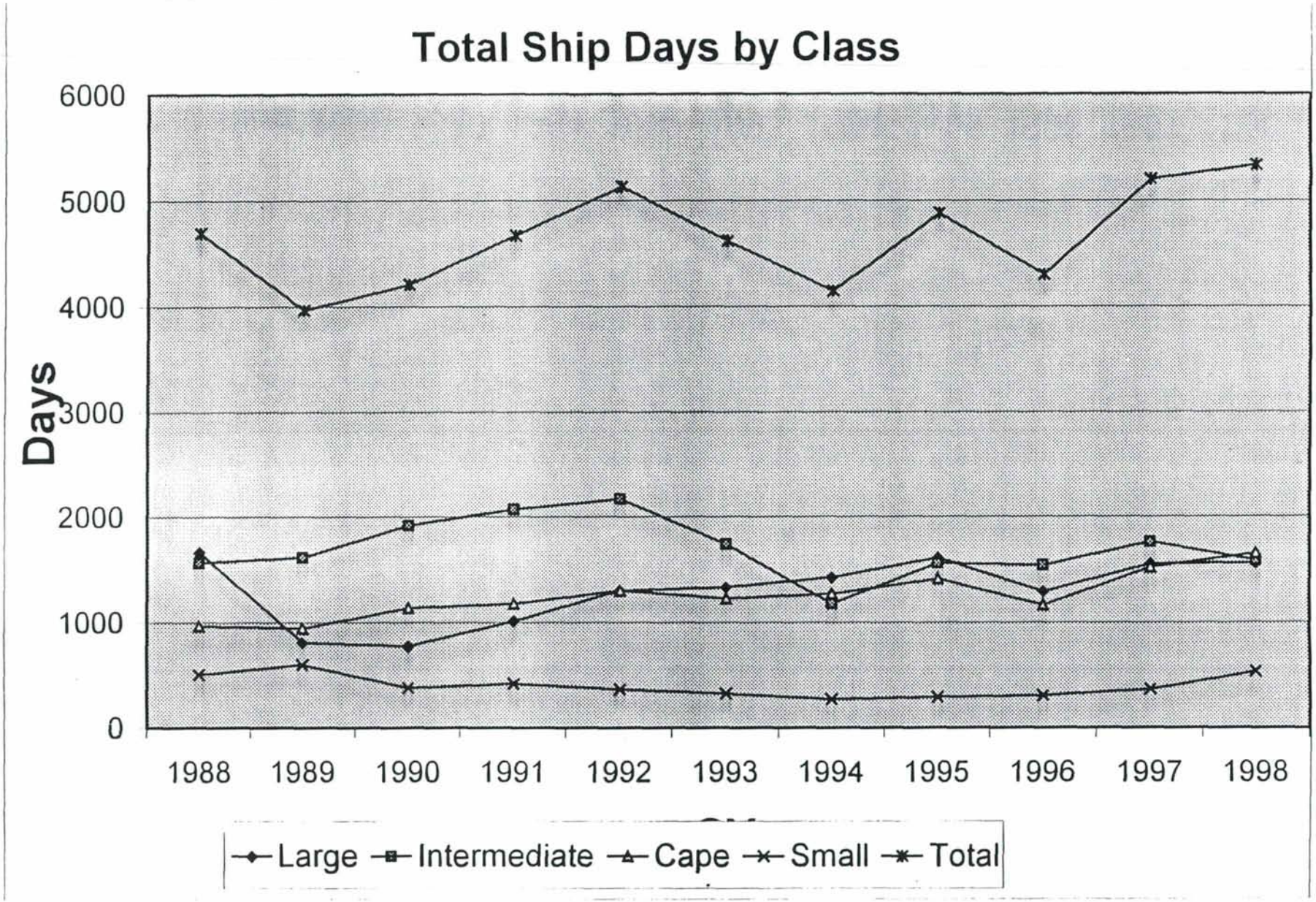
01/30/98

Academic Research Fleet Operations and Management Review

Context

- National Science Board reviewed request for continuation of Oceanographic Research Vessel and Submersible Operations awards for 5 years in November, 1997.
- Operations awards were approved for a shorter duration -- 2 years, 1998 and 1999.
- NSF staff are to review and report back on the cost-effectiveness of the present and possible alternative methods of managing ship operations
- Review procedures will follow principles outlined in NSB Resolution concerning Competition, Recompetition, and Renewal of NSF Awards for facilities operations (NSB 97-224).


NSF Days by Class
Days
4000
3500
3000
2500
2000
1500
1000
500
0
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
CY
Large
Intermediate
Cape
Small
Total


Total Ship Days by Class
Days
6000
5000
4000
3000
2000
1000
0
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
Large
Intermediate
Cape
Small
Total

NSF TOTAL DAYS

Ship	Length		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Melville	279		145	148 m/l	m/l		137	241	302	256	291	200	154
Knorr	279		280 m/l	m/l	m/l		271	167	218	350	267	153	190
Thompso	274	-				0	231	223	146	215	171	62	131
Revelle	274	-									1	233	128
Atlantis	274	-										157	202
Ewing	239	-			111	300	190	221	292	180	311	192	76
A II	210		254	194	147	247	146	183	253	296	78 o/s		
Conrad	208		275	58 o/s									
Thompso	208		121 o/s										
Washingt	208		269	229	224	320	94 o/s						
		Sub Total	1344	629	482	867	1069	1035	1211	1297	1119	997	881
Vickers	220				10	86	55	115 o/s					
M.Wave	210		281	285	166	218	223	183	142	171	105	179	111
Johnson	204		12	0	12	12	36	31	50	81	208	179	124
Wecoma	185		169	157	190	154	229	135	75	70	103	116	70
Endeavor	184		144	193	134	67	150 m/l		127	191	78	117	0
Gyre	182		10	91	118	7	51	23	49	0	0	9	31
Oceanus	177		148	227	96	51	171	87 m/l		124	71	155	161
N.Horizon	170		104	67	105	89	130	170	175	193	148	143	60
Iselin	170		164	172	271	228	197	159	4 o/s				
Link	168		7	37	0	34	24	21	51	22	68	43	37
		Sub Total	1039	1229	1102	946	1266	924	673	852	781	941	594
P.Sur	135		41	60	79	49	79	93	119	110	46	81	121
Hatteras	135		137	178	146	187	168	168	130	133 l/u		120	111
Helix	133		194	115	105	109	102	129	145	89	27	71	139
Sproul	125		121	83	101	121	96	30	64	78	79	118	65
Henlopen	120		30	101	35	136	125	128	117	167	158	84	106
Wbird II	115	--			225	193	215	99	140	151	144	130	134
Sea.Diver	113	--							8	30	57	6	18
Warfield	106		111	107 o/s									
Pelican	105		9	16	28	0	34	56	29	0	23	54	62
Longhorn	105		0	0	0	15	14	39	39	36	70	4	6
Urraca	96	-						-			0	38	15
		Sub Total	643	660	719	810	833	742	791	794	604	706	777
Laurentia	80		46	46	25	50	28	56	59	79	46	35	140
BlueFin	72		51	37	51	25	72	53	26	72	94	68	76
Calanus	68		116	94	55	72	85	91	50	22	28	76	90
Barnes	66		60	70	129	139	75	46	46	57	61	101	72
WBI	65		130	186 o/s									
		Sub Total	403	433	260	286	260	246	181	230	229	280	378
		Total	3429	2951	2563	2909	3428	2947	2856	3173	2733	2924	2630

TOTAL DAYS

Ship	Length		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
Melville	279		207	224	m/l	m/l	170	306	303	297	297	308	216
Knorr	279		303	m/l	m/l	m/l	271	278	253	350	269	284	266
Thompso	274					83	277	282	255	333	246	214	277
Revelle	274										71	288	316
Atlantis	274											185	272
Ewing	239				198	300	299	221	310	310	315	273	215
A II	210		343	223	281	292	179	247	306	319	93	o/s	
Conrad	208		352	103	o/s								
Thompso	208		128	o/s									
Washingt	208		331	260	293	336	105	o/s					
		Sub Total	**1664**	**810**	**772**	**1011**	**1301**	**1334**	**1427**	**1609**	**1291**	**1552**	**1562**
Vickers	220				10	86	226	203	o/s				
M.Wave	210		300	295	283	269	278	249	215	195	144	202	169
Johnson	204		12	0	177	220	211	136	88	271	305	290	281
Wecoma	185		226	218	239	212	270	220	84	145	198	199	226
Endeavor	184		224	259	220	196	201	m/l	130	228	147	201	158
Gyre	182		133	163	212	220	129	159	148	122	219	184	144
Oceanus	177		230	252	157	213	313	189	m/l	187	168	209	245
N.Horizon	170		216	169	233	207	175	239	241	240	174	259	221
Iselin	170		217	222	279	239	206	221	21	o/s			
Link	168		7	37	107	206	157	122	247	175	186	214	141
		Sub Total	**1565**	**1615**	**1917**	**2068**	**2166**	**1738**	**1174**	**1563**	**1541**	**1758**	**1585**
P.Sur	135		141	163	177	155	177	174	185	164	118	188	193
Hatteras	135		204	190	180	228	216	194	173	175	l/u	221	205
Helix	133		198	155	109	112	146	167	163	144	73	118	172
Sproul	125		159	117	135	181	140	146	111	145	155	182	164
Henlopen	120		57	121	64	159	170	157	170	198	185	195	195
Wbird II	115				238	204	225	109	144	154	167	153	134
Sea Diver	113								138	180	134	105	133
Warfield	106		112	107	o/s								
Pelican	105		93	89	121	93	168	224	134	182	201	203	244
Longhorn	105		0	0	111	44	58	53	53	72	130	46	63
Urraca	96											112	147
		Sub Total	**964**	**942**	**1135**	**1176**	**1300**	**1224**	**1271**	**1414**	**1163**	**1523**	**1650**
Laurentia	80		58	57	53	83	59	62	83	91	72	44	148
BlueFin	72		72	61	71	49	108	96	59	75	96	82	95
Calanus	68		137	160	101	127	110	106	54	48	50	111	167
Barnes	66		80	108	154	157	87	60	72	77	86	126	119
WBI	65		154	211	0/s								
		Sub Total	**501**	**597**	**379**	**416**	**364**	**324**	**268**	**291**	**304**	**363**	**529**
			4694	3964	4203	4671	5131	4620	.4140	4877	4299	5196	5326
		Total											

APPENDIX VI

RESULTS FROM SHIP DATA QUERIES

Overview:

Data were queried from two separate data bases the IBM/NSF data base and the Access/OCE panel data bases for the four disciplinary OCE programs (BO, CO, MGG, and PO). The IBM system was queried based on SPDE code entered under the subsection I. Data with codes containing A (Large Ship-primary user) and C (Small Ship-primary user) were returned under this query. Data for the overall number of proposal for each fiscal year, as well as, success rate were gathered using the Executive Information System (EIS). The data covers the period between fiscal year 1988 to fiscal year 1996.

For the Access data bases, data were queried from each separate access file for each program and panel. Data from the various panels, both special panels (e.g. GLOBEC, JGOFS, MESH) and core panels, were combined under one spreadsheet for each program. Data for ship time were based on the information entered under the ship request form in the Access data base. Program Managers provided a detailed list of proposals which have been awarded or declined over the last three to four years. These two data bases were then combined to determine the success rates of proposal with and without ship request, as well as, trends in the number of ship request. Access data covers the period between fiscal year 1996 (1995 for some programs) to fiscal year 1998. In all graphs, data retrieved from the IBM system (1988-1995) are indicated by filled symbols and solid lines. Data retrieved from the Access data base (1996-1998) are indicated by unfilled symbols and dashed lines.

The major difference between the two data bases is that the IBM uses proposals, where as, Access uses projects (treats collaborative proposals as one project) as the basic unit. Generally, the number of projects is 10 – 15 % lower than the number of proposals.

NOTE:

The proposal, award and success rate data in this report only track the four large disciplinary program areas in the Ocean Sciences Research Section -- Physical Oceanography, Biological Oceanography, Marine Geology and Geophysics and Chemical Oceanography. Collectively these programs represent approximately 85% of the "research funds" in the division.

The Oceanographic Technology and Interdisciplinary Cooperation (OTIC) program and Education and Human Resources (EHR) program in the research section and the Ocean Drilling Program (ODP) grants program are not included. OTIC was transfered to the research section from the facilities section in 1993 with an expansion of scope and the EHR program was established from ongoing distributed activities in 1997. They and the ODP grants program do not have historical "data bases" equivalent to those used for these statistics.

Figure 1: Overall trends in ship requests-total number of proposals with ship requests (Total), number of awards with ship requests (Awards), and number of declines with ship requests (Declines). Data retrieved from the IBM system (1988-1995) are indicated by filled symbols. Data retrieved from the Access data base (1996-1998) are indicated by unfilled symbols.

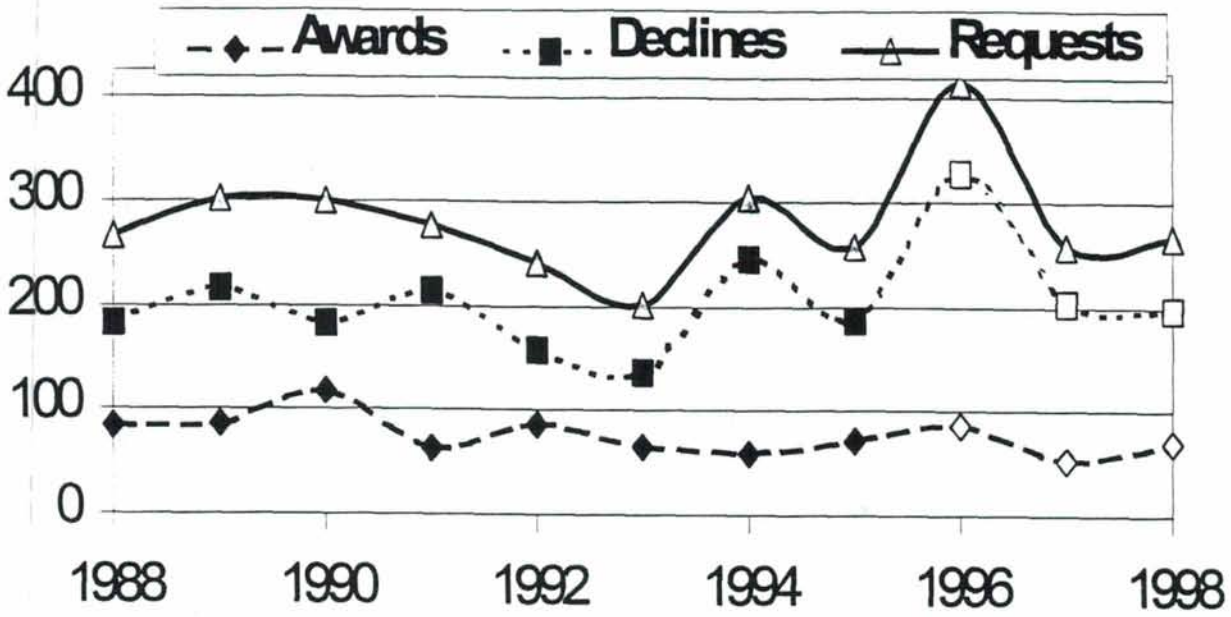


Fig 2. Number of proposals with ship request by program. Data retrieved from the IBM system (1988-1995) are indicated by filled symbols. Data retrieved from the Access data base (1996-1998) are indicated by unfilled symbols.

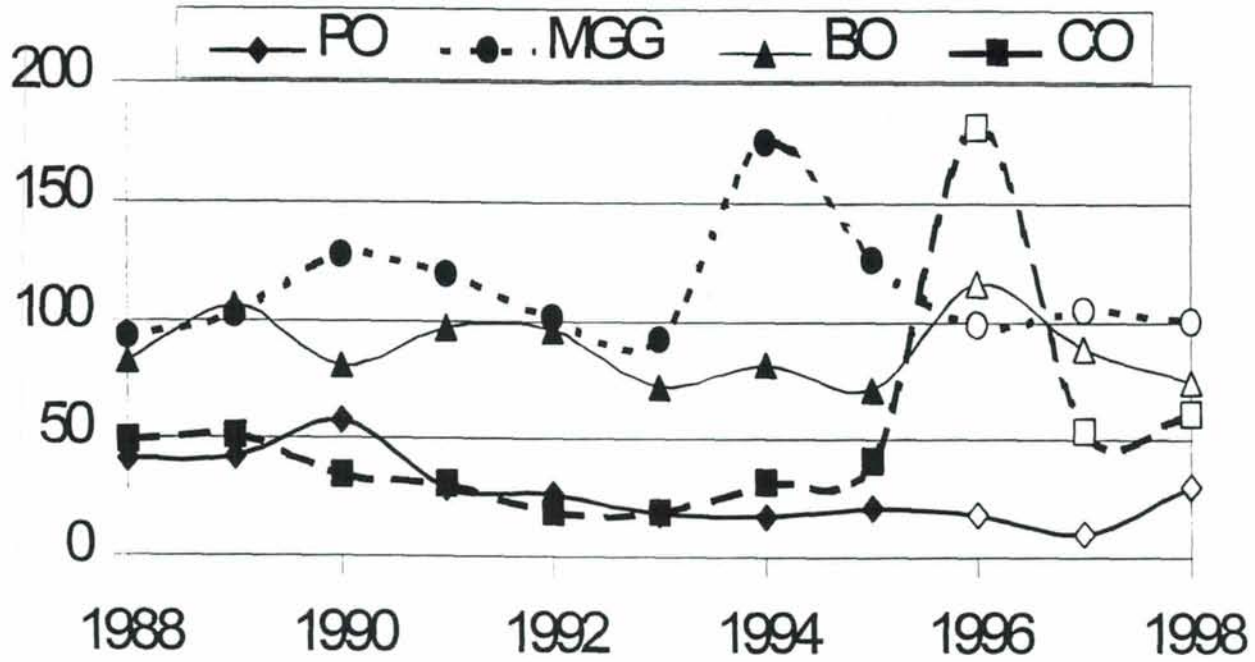


Fig 3. Overall success rates for the four disciplinary programs and success rates for proposal with ship requests. Data retrieved from the IBM system (1988-1995) are indicated by filled symbols. Data retrieved from the Access data base (1996-1998) are indicated by unfilled symbols.

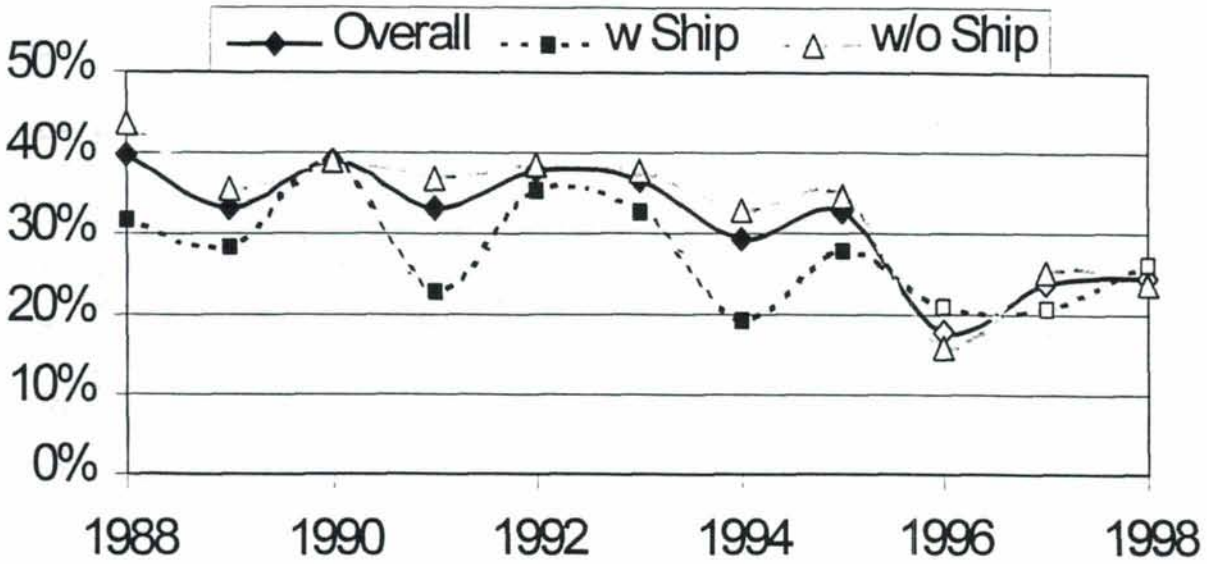


Fig 4. Total number of OSRS proposals and the percent of those proposals requesting ship time. Data retrieved from the IBM system (1988-1995) are indicated by filled symbols. Data retrieved from the Access data base (1996-1998) are indicated by unfilled symbols.

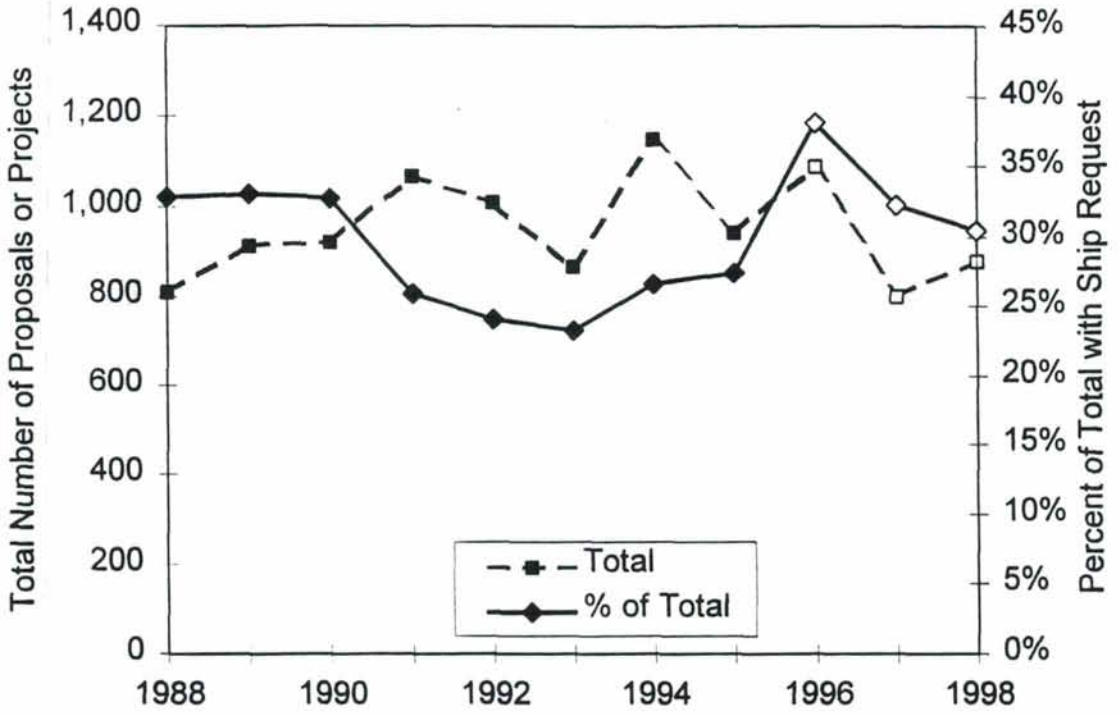


Fig. 5. Total number of OSRS awards and the percent of those awards requesting ship time. Data retrieved from the IBM system (1988-1995) are indicated by filled symbols. Data retrieved from the Access data base (1996-1998) are indicated by unfilled symbols.

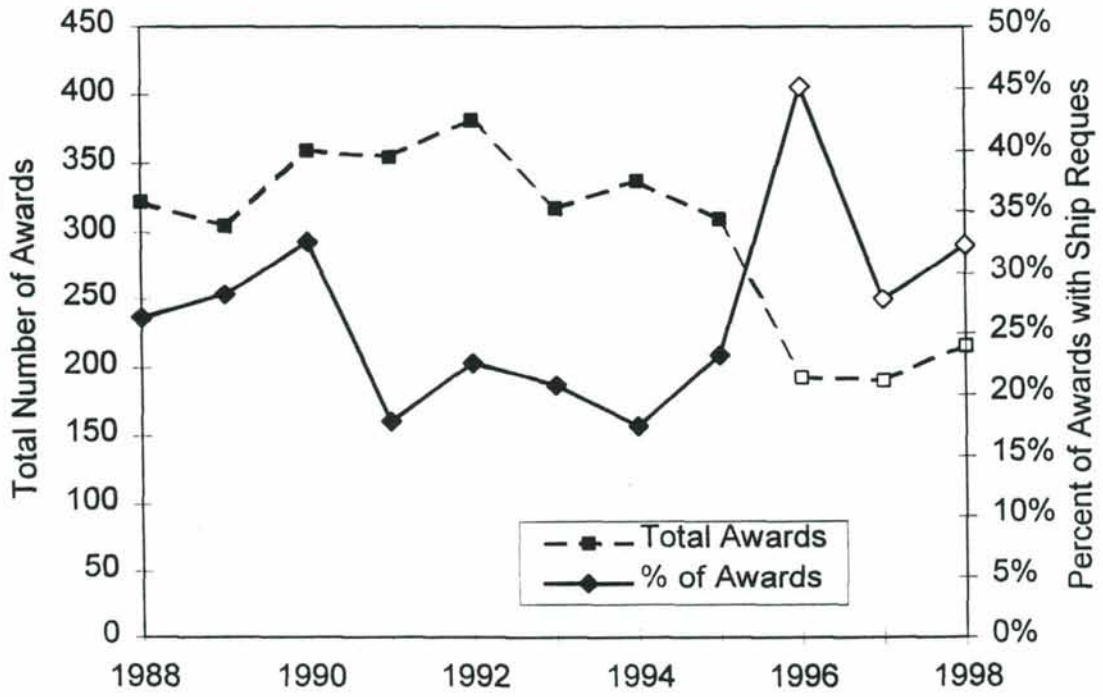


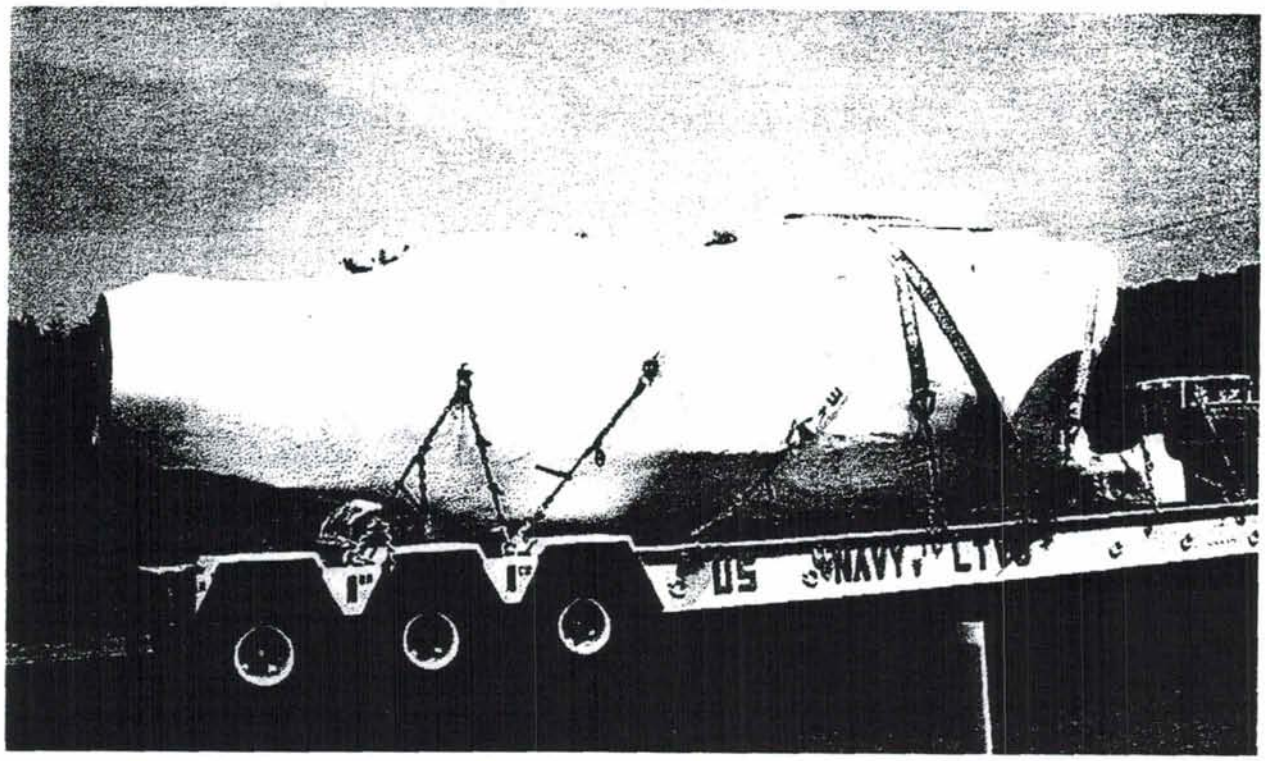
Table 1: Summary of ship request data used in this analysis. Difference refers to the difference between the success rate of projects with ship time and projects without ship time (a + number indicates projects with ship time had a higher success rate then those without ship time). Bold type indicates data retrieved from the Access system; all other data are from the IBM system.

Year Program	Ship Request			Total Proposals			Success Rate			
	Awards	Declines	Total	Awards	Declines	Total	Overall	w/ Ship	w/o Ship	Difference
1988 PO	12	29	41	72	78	150	48%	29%	55%	-26%
1989 PO	14	28	42	52	87	139	37%	33%	39%	-6%
1990 PO	29	28	57	96	114	210	46%	51%	44%	7%
1991 PO	11	18	29	70	102	172	41%	38%	41%	-3%
1992 PO	20	6	26	82	102	184	45%	77%	39%	38%
1993 PO	9	9	18	68	87	155	44%	50%	43%	7%
1994 PO	6	11	17	69	125	194	36%	35%	36%	0%
1995 PO	6	15	21	75	97	172	44%	29%	46%	-17%
1996 PO	**4**	**14**	**18**	**35**	**121**	**156**	**22%**	**22%**	**22%**	**0%**
1997 PO	**2**	**8**	**10**	**40**	**61**	**101**	**40%**	**20%**	**42%**	**-22%**
1998 PO	**8**	**22**	**30**	**59**	**125**	**184**	**32%**	**27%**	**33%**	**-6%**
1988 MGG	26	68	94	105	161	266	39%	28%	46%	-18%
1989 MGG	24	79	103	95	184	279	34%	23%	40%	-17%
1990 MGG	43	85	128	128	193	321	40%	34%	44%	-10%
1991 MGG	27	93	120	118	250	368	32%	23%	37%	-14%
1992 MGG	23	79	102	101	219	320	32%	23%	36%	-13%
1993 MGG	22	71	93	98	210	308	32%	24%	35%	-12%
1994 MGG	30	145	175	122	305	427	29%	17%	37%	-19%
1995 MGG	34	92	126	102	227	329	31%	27%	33%	-7%
1996 MGG	**15**	**84**	**99**	**64**	**351**	**415**	**15%**	**15%**	**16%**	**0%**
1997 MGG	**14**	**91**	**105**	**69**	**248**	**317**	**22%**	**13%**	**26%**	**-13%**
1998 MGG	**19**	**82**	**101**	**67**	**208**	**275**	**24%**	**19%**	**28%**	**-9%**
1988 BO	24	59	83	74	160	234	32%	29%	33%	-4%
1989 BO	30	76	106	94	224	318	30%	28%	30%	-2%
1990 BO	26	55	81	89	195	284	31%	32%	31%	1%
1991 BO	12	85	97	91	266	357	25%	12%	30%	-18%
1992 BO	30	66	96	127	262	389	33%	31%	33%	-2%
1993 BO	27	45	72	91	189	280	33%	38%	31%	7%
1994 BO	14	68	82	92	268	360	26%	17%	28%	-11%
1995 BO	20	51	71	80	191	271	30%	28%	30%	-2%
1996 BO	**37**	**79**	**116**	**55**	**211**	**266**	**21%**	**32%**	**12%**	**20%**
1997 BO	**16**	**73**	**89**	**52**	**208**	**260**	**20%**	**18%**	**21%**	**-3%**
1998 BO	**29**	**46**	**75**	**62**	**198**	**260**	**24%**	**39%**	**18%**	**21%**
1988 CO	23	26	49	72	90	162	44%	47%	43%	4%
1989 CO	18	33	51	64	114	178	36%	35%	36%	-1%
1990 CO	19	16	35	46	60	106	43%	54%	38%	16%
1991 CO	13	18	31	76	96	172	44%	42%	45%	-3%
1992 CO	13	6	19	71	45	116	61%	68%	60%	9%
1993 CO	8	11	19	61	64	125	49%	42%	50%	-8%
1994 CO	9	23	32	55	114	169	33%	28%	34%	-5%
1995 CO	12	29	41	53	118	171	31%	29%	32%	-2%
1996 CO	**31**	**151**	**182**	**39**	**213**	**252**	**15%**	**17%**	**11%**	**6%**
1997 CO	**21**	**33**	**54**	**29**	**93**	**122**	**24%**	**39%**	**12%**	**27%**
1998 CO	**14**	**47**	**61**	**28**	**132**	**160**	**18%**	**23%**	**14%**	**9%**
1988 OSRS	85	182	267	323	489	812	40%	32%	44%	-12%
1989 OSRS	86	216	302	305	609	914	33%	28%	36%	-7%
1990 OSRS	117	184	301	359	562	921	39%	39%	39%	0%
1991 OSRS	63	214	277	355	714	1069	33%	23%	37%	-14%
1992 OSRS	86	157	243	381	628	1009	38%	35%	39%	-3%
1993 OSRS	66	136	202	318	550	868	37%	33%	38%	-5%
1994 OSRS	59	247	306	338	812	1150	29%	19%	33%	-14%
1995 OSRS	72	187	259	310	633	943	33%	28%	35%	-7%
1996 OSRS	**87**	**328**	**415**	**193**	**896**	**1089**	**18%**	**21%**	**16%**	**5%**
1997 OSRS	**53**	**205**	**258**	**190**	**610**	**800**	**24%**	**21%**	**25%**	**-5%**
1998 OSRS	**70**	**197**	**267**	**216**	**663**	**879**	**25%**	**26%**	**24%**	**2%**

APPENDIX VII

SEA CLIFF
(DSV-4)

Status Report



Arrived August 5, 1998

Current Projects

- Layup maintenance program
- Long-term storage arrangements
- Obtaining manipulators and replacement trim systems from Navy
- Obtaining spare parts from Navy
- Obtaining maintenance and engineering records

SEA CLIFF/TURTLE Parts in Current Use

- EDO/Straza 1510 CTFM sonar
- Spare UQC underwater telephone

Engineering Study

- Approved and funded
- Integration of SEA CLIFF and ALVIN systems into 6,000m submersible
  - Detailed study of SEA CLIFF systems
    - *Study plans, manuals and material history*
    - *Study actual vehicle, components & material on site*
  - Investigation of 6,000m submersible component market
  - Inspection of currently-operating 6,000m submersibles
  - Investigate sphere construction and viewport location issues
  - Develop design concepts and cost projections

APPENDIX VIII

UNOLS COUNCIL NOMINATIONS 1998

Nominating Committee

Dennis Hansell (Chair), Clare Reimers, Peter Lonsdale

Time Frame

1) February/March 1998 - Nomination Committee formed
2) April - July 1998 - Announcements published
3) July 1998 - Draft Election Slate presented to Council
4) July/August 1998 - Election Slate finalized
5) September 1998 - Council Elections

Announcements Requesting Nominations

1) UNOLS Newsletter (May)
2) Advertisements on ScienceNet (April)
3) Advertisement in EOS (May)
4) Letters to the Institutional Representatives to UNOLS (May)
5) Letters to Dean/Directors of UNOLS institutes (May)
6) 2nd Letter to Representatives/Deans/Directors (July)
7) Direct recruitment by telephone/e-mail

09/14/98

NOMINATION SLATE

CHAIR

Knox, Bob	Physics	SIO

VICE CHAIR

Royer, Tom	Physics	ODU

COUNCIL

AT-LARGE

Firing, Eric	Physics	UH
Lee, Tom	Physics	RSMAS
Youngblouth, Marsh	Biology	HBOI

NON-OPERATOR

Bauer, Jim	Chemistry	VIMS
Bocconcelli, Alex	Marine Engineering	UNCW
Flagg, Charlie	Physics	BNL

SPECIAL AT-LARGE

Bryant, Bill	Geology	TAMU
Cowles, Tim	Biology	OSU
Fornari, Dan	MG&G/DeepSubmerg.	WHOI
Tochko, John	Physics	Johns Hopkins APL

09/14/98