

**Minutes of the 1996 Annual RVOC Meeting
University of South Florida/Florida Institute of Oceanography
St. Petersburg, FL**

**USF DAVIS HALL - Room 130
Tuesday, 22 October 1996**

The meeting was called to order by RVOC Chair, Mike Prince, Marine Superintendent of Moss Landing Marine Laboratories.

WELCOMING REMARKS

Gene Olson, Marine Superintendent, Florida Institute of Oceanography (FIO) welcomed the RVOC to St. Petersburg and introduced Dr. Winston Bridges, Assistant Dean of the University of South Florida (USF). Dr. Dean extended a greeting to attendees on behalf of the University of South Florida.

Dr. John Ogden, Director of the Florida Institute of Oceanography, extended a greeting on behalf of FIO and provided an overview of FIO facilities. FIO, with its facilities, provides support to the nine campuses of the Florida State University system.

Dr. Peter Betzer, Dept. of Oceanography at USF and former Vice Chairman of UNOLS, welcomed the RVOC and spoke of the strong local support for Ocean Science programs.

AGENDA

The meeting followed the Agenda outlined in *Appendix I*. Registered attendees are listed in *Appendix II*.

OLD BUSINESS

Minutes of the 1995 Meeting - A motion was made, seconded, and passed to accept the minutes of the 1995 meeting.

Post Cruise Evaluations - A draft of the revised Post Cruise Assessment report was approved by the UNOLS Council to be used in a beta-test mode. A copy of this form is contained in *Appendix III*. The same report form will be used by scientists, captains and technicians. A preamble and set of instructions will be prepared by the UNOLS Chair and the draft form will be made available, primarily as an electronic form. The reports would be submitted as e-mail to the vessel operator and the UNOLS Office. A response would be sent to anyone filing a report. The draft report is available on the MLML Marine Operations home page at:

<http://color.mlml.calstate.edu/www/marinops/marinops.htm>

and will be available through the UNOLS Office after the instructions and preamble have been added.

Van Study Final Review - The final draft of the Fleet Improvement Committee (FIC) van study should be sent once more for RVOC review and comment. Using the final report, the Safety Committee will develop a checklist for inspecting vans and these standards will be incorporated in the RVOC Safety Standards.

Medical Standards/Job Descriptions - A committee has been working on drafts of job performance standards, medical standards and medical history questionnaires. Work will continue on these drafts during Wednesday afternoon's workshop.

White Paper - A white paper on the benefits of the University operated research fleet was completed by UNOLS Chair, Dr. Ken Johnson. This project began at last year's RVOC meeting. It has been published by the UNOLS Office and can be found on the UNOLS Office home page.

NEW BUSINESS

Primer on Small Research Vessels - Dave Powell of the University of Miami has volunteered to co-ordinate the production of a primer on small research vessels. Several members of RVOC will be contributing to this primer and some additional contributors will be required. Also the definition of what constitutes a "small" research vessel will have to be refined. Some suggested categories are under 65 feet, 65 - 85 feet and 85 - 105 feet.

Size Limit On UNOLS Vessels - A committee was formed by the UNOLS Council during their February meeting at the Naval Oceanographic Office. This committee will be chaired by Dr. Robert Wall and included members Dr. Tom Royer and Steve Rabalais. The committee was to look at the criteria for becoming a UNOLS research vessel and whether or not there should be a lower size limit. If this were to be the case, what should that limit be?

A lower limit of 100 feet was suggested during the discussion leading to the formation of this committee, consequently, it has been described as a committee that was focused on that particular limit. The committee has in fact expanded the scope of their attention to the broader issue of what the criteria should be to become a UNOLS vessel and whether there should be limits or different classes of UNOLS Research Vessels. If small and large vessels are included as UNOLS vessels what criteria should be used to designate a vessel? Should there be a dividing line between National/Regional vessels and Local vessels and how should that line be drawn? What would be the extreme lower limit for designation as a UNOLS vessel? Would there be different treatment for the Local UNOLS vessels and what would be the difference in treatment? The discussion led to more questions than answers and the issue will not be easily resolved.

There are several benefits to being designated a UNOLS vessel. Among the benefits is that NSF cannot fund a vessel unless it is designated a UNOLS vessel. In addition, designation as a UNOLS vessel entitles it to technician, scientific equipment, and instrumentation support.

Anyone with input was encouraged to direct it to Steve Rabalais or one of the other committee members.

New Contract For UNOLS Fleet Inspections - Jack Bash reported that the UNOLS Office was preparing a Request for Proposals (RFP) to contract for the replacement of the NSF/ABSTECH inspection team. The contract with ABSTECH expired approximately a year ago and inspections have not taken place. Some or all of the previous inspection team would not be available to continue in future inspection programs. NSF is concerned that the inspection program be administered in such a way that it is and appears to be at arms length from the UNOLS fleet. RVOC requested that they be allowed to review the RFP and planned to discuss this issue during workshops and the Round Table.

Safety Video for Scientists - Tom Smith reported that the Safety Committee will be working on developing a safety video along with other interested people during a workshop on Wednesday afternoon. The purpose of this will be to better define the scope and purpose of this project and develop a plan for implementing it.

Joe Ustach of Duke offered up, as an example, a R/V CAPE HATTERAS safety video which had been prepared by a company filming on CAPE HATTERAS.

It was noted that the Fleet Improvement Committee and the UNOLS Council are interested in RVOC going forward with the submission of a proposal for the production of a safety video.

COMMITTEE AND LIAISON REPORTS

UNOLS - Jack Bash reported on UNOLS. He described 1996 as a watershed year for UNOLS during which the stage was set for new partnerships with NOAA and NAVOCEANO. He said that we need to understand how to operate with these agencies as new partners. They represent \$10 million in new operating money for the UNOLS fleet in 1997.

A new committee has been formed for coordination with the Coast Guard called the Arctic Icebreaker Coordinating Committee (AICC) chaired by Dr. Jim Swift of SIO. Joe Coburn will be on the committee and will serve as liaison for RVOC. The Coast Guard is seeking advice on HEALY's construction, future HEALY operations and how science parties are to be brought aboard HEALY. They will be more like another UNOLS Operator Institution with the commencement of operation of HEALY.

The Navy is in the early stages of planning to decommission SEA CLIFF and TURTLE in the next couple of years. They have asked DESSC to see whether or not they can use these vehicles.

A UNOLS committee is being put together to survey the whole community and how we might integrate that with what we have.

During this past year the MEDEA/JASON ROV systems use has increased and operations have been conducted using ships of opportunity. This new interest in ROVs comes at a time when ALVIN is in overhaul and the new ATLANTIS is coming on line, so there is some question as to the demand for both systems when ALVIN is back on line. Also, there is a question as to whether the ROVs will continue to operate in the fly-away mode or primarily from ATLANTIS.

REVELLE and ATLANTIS are entering the UNOLS fleet and RON BROWN is entering service as part of the NOAA fleet. This substantially increases the availability of large ships and increases the total cost of operating the fleet. The use of the BROWN will decrease somewhat the use of UNOLS by NOAA. A meeting is scheduled for 1 November that will explore ways to better integrate the UNOLS and NOAA fleets.

This past year presented several difficulties in scheduling, primarily for the larger vessels. An ad hoc committee is being formed to review the scheduling process and make recommendations for improvements.

Electronic filing of Shiptime Requests (831s) will be ready in the near future. (Since the RVOC meeting, the electronic version of the Shiptime Request Form has been made available and is up and running on the UNOLS home page.)

Safety Committee - Tom Smith reported on the Safety Committee activities. The committee consisted of Tom, Joe Coburn, Tim Askew, Bill Hahn and Steve Rabalais. The goals for the committee are to prepare a proposal for the Introductory Safety Video; to shift the accident statistics reporting to the UNOLS Office to make it more automatic and complete; and to begin review of the Safety Standards for the 1999 revision.

Research Vessel Technical Enhancement Committee (RVTEC) - Steve Rabalais, LUMCON, reported on RVTEC. He noted that he would not be attending future RVTEC meetings and that a new liaison to that committee should be assigned. Since Harbor Branch will be hosting the RVTEC meeting on November 11 - 13, Tim Askew of HBOI will serve as this year's liaison. Noe Cantu, UT, may be available to fill that role in the future.

At this years meeting, the RVTEC will cover data standards, update of the technician/equipment database, hold a workshop on conducting and fiber optic cables, start long range instrumentation planning, examine NAVO technician requirements and discuss data communications.

Fleet Improvement Committee (FIC) - Joe Coburn, WHOI, reported that the traditional role of FIC was to update the Fleet Improvement Plan, the last one having been published this year. The FIC would be starting on the update this year. However, because of the dire projections for a lack of funding for the current fleet, the FIC was directed to develop an interim Fleet Plan that was to look at how to deal with the shortfall in dollars or over-capacity. Events overtook this plan, in that a large amount of new work was introduced into the fleet from NAVOCEANO and

NOAA. The newest task for FIC is to develop Science Mission Requirements (SMRs) for a mid-Pacific Research Vessel due to the inclusion of a large SWATH in the Navy appropriations budget.

Arctic Icebreaker Coordinating Committee (AICC) - Joe Coburn reported on the formation of this new committee that was requested by the Coast Guard after it became clear from the science community and the Ocean Studies Board report that this needed to be done.

The Committee has held their first meeting with the Coast Guard and their immediate task is to respond to a number of design and outfitting questions provided by the builder of HEALY. Next, the committee will look at design features that need to be changed and that can be changed. The long term goal is to help the Coast Guard in the scheduling and operation of HEALY.

AGENCY REPORTS

National Science Foundation (NSF) - Dolly Dieter reported that Lisa Rom is on a one year leave of absence and that Dr. Alexander (Sandy) Shor will replace her as manager of the Technician and Oceanographic Instrumentation programs.

She also reported that the Department of Grants and Awards will be changing the Ship Operations Grants from Award letters to Cooperative Agreements. The Cooperative Agreements will include considerably more detail regarding how funds may be used. This will begin with the 1997 funding and may impact the timing of awards if the final form of the agreements are not ready soon.

The budget shortfall is approximately \$5 million based on the amounts requested in this year's Ship Operations proposals. The planning budget for Ship Operations was approximately \$32 million and submitted proposals totaled \$37 million.

Naval Oceanographic Office (NAVOCEANO) - CDR Jim Trees USN and Gordon Wilkes represented the Naval Oceanographic Office.

CDR Trees, Operations Officer for Naval Oceanographic Office, reported that NAVOCEANO has received an addition \$7.5 million through the National Ocean Partnership Act (NOPA) to be used for already identified surveying needs in the coastal zone of the United States using UNOLS vessels. The NAVO fleet is generally deployed in other parts of the world and the needs off the U.S. were not being fulfilled.

NAVO will be using ten ships from eight different institutions conducting 13 surveys for a total of 432 operating days. They are pleased with the way that the scheduling process has worked for them and are now working on ship visits and planning with the individual operators for the cruises that will begin early in 1997. Requests for use of the data collected on these cruises will have to be submitted through NAVOCEANO.

NAVO will look at the possibility of using the UNOLS fleet in the future for conducting surveys in International waters and in other countries EEZs. This will present several problems relative to the Law-of-the-Sea and will have to be carefully studied before it can be implemented. In the mean time, UNOLS can continue to fill the needs for domestic surveys.

National Oceanographic and Atmospheric Administration (NOAA) - Captain Martin Mulhern and Commander Elizabeth White represented NOAA.

Captain Mulhern reported that this year was a watershed year for NOAA as well, but was more the culmination and continuation of a long range process to work with outside entities, such as the academic community, to fulfill NOAA's needs.

Captain Mulhern reported that R/V RON BROWN has been launched. Delivery is scheduled for the end of April and operations are slated to begin by the summer of 1997. R/V KI'AIMIMOANA is now in service and homeported in Honolulu. It is primarily being used to support the TOGA TOA array along the equator. Several vessels have left service including BALDRIDGE, DISCOVERER, FAIRWEATHER and DAVIDSON. HECK and MT. MITCHELL have been disposed of. NOAA will have 16 active ships when RON BROWN comes online. In addition, the SWATH, HALCYON, was recently put into service on the Great Lakes.

NOAA's use of the UNOLS fleet will amount to \$3.1 million in 1997 due to the partial year of service for R/V RON BROWN, with a long term commitment in future years of \$2.6 million per year. The 1997 NOAA budget includes \$56 million in what used to be called Marine Services and is now call Acquisition of Data. There is also \$8 million for maintenance of the NOAA fleet including \$2 million for outfitting BROWN.

A committee has been formed to examine co-operation between NOAA and UNOLS. It will be co-chaired by Ken Johnson, UNOLS Chair, and Allen Thomas from NOAA

In 1997, fisheries vessel, OREGON, will be out of service for major repairs and in 1998 major overhaul of MILLER FREEMAN is to begin. MILLER FREEMAN's work will be covered with a combination of UNOLS and private charters.

NOAA Fisheries has a growing need for shiptime which is projected in a couple of years to be around 4400 sea days. This is on the order of twice the current level. Some of the fisheries research work is being done on UNOLS vessels and this could increase in the future. Stock assessment work is generally done from vessels that can handle commercial size trawling equipment.

Captain Mulhern also reported on the status of the NOAA Corps. He stated that the Corps still exists and that the current language of the Senate bill is supportive of the Corps, calling for it to continue. The House bill is less supportive. By November 15, 1996 the administration has to submit to Congress a report on the future plans for the Corps and this report will have a lot to do with the fate of the Corps. A NOAA study shows no significant cost savings in eliminating the

Corps and no clearly stated reason for eliminating it. In the meantime, the Corps has downsized by about 25% to 315 and plans to be at 299 by October 97. The "jury" is still out on the life of the Corps.

A question was asked about privatizing the fisheries fleet. That option is not certain, but would be considered along with other options. The fisheries programs are planning to bring new vessels into service by the year 2000 primarily dedicated to specific fisheries. NOAA is planning to spend \$2.3 million in 1998 on the design of these new fisheries vessels.

An A76 cost comparison process will be applied to the KI'AIMIMOANA and any other vessels that would like to participate. An RFP has gone out in the Federal Register soliciting those who want to participate to notify NOAA.

Lastly, Marty reported that he was transferring to Boulder, Colorado and would not be involved with the UNOLS fleet in the future except as part of the FASTEX program on KNORR.

Lunch

AGENCY REPORTS - Continued

U.S. State Department - Tom Cocke reported that the biggest problem that he had for getting clearances was the late submission of clearance requests to him and consequently to the coastal state. Greater emphasis by the operator needs to be placed on this. His department like the rest of the State Department has been impacted by government downsizing such that he is performing many tasks other than those relating to foreign clearances. There were a lot of problems this year because of late clearances and the French have now indicated that they would no longer accept late requests. In addition, we have always had problems with Columbia, Venezuela, Mexico, and Brazil. He essentially said that submitting requests in excess of one month before they are due in the Coastal State would help in getting timely notification of clearance.

Tom recommended that foreign clearances be part of the scheduling process to ensure that enough time is available to meet the deadlines for foreign clearances and to get information to PIs as early as possible concerning request requirements. Finally, he indicated that submitting a request that is incomplete and requires more detail was better than submitting a late request.

Implied consent was discussed and Tom was encouraged to put in place implied consent or notification arrangements wherever possible, similar to the arrangement recently made with the UK.

The Foreign Clearance Manual is on the UNOLS home page and access to the Notice To Research Vessel Operators (NTRVO) will soon be available as well.

SPECIAL REPORTS

Canadian Coast Guard - Don White, Rod Stright and Dale Gibb reported on the merger of the Canadian Coast Guard fleet with the Fisheries and Ocean fleet and how they are reducing the size of the combined fleet. The new organization resulting from the merger of the two departments will be called the Canadian Coast Guard.

A combined personnel reduction of 30-40% is being targeted for the new organization, part of which must be met by the fleet. Every type of ship in their inventory is being reduced. Their largest ship, HUDSON, is scheduled for retirement in December 1997. Remaining vessels will be multi-tasked; they must be capable of supporting more than one of the program requirements of the two merged departments. These program requirements are rescue safety and environmental response, marine navigational services, icebreaking, science programs, and fisheries programs.

Some of next year's science projects include: Surface Heat Budget of the Arctic Ocean (SHEBA) where they will freeze a 1200 class icebreaker into the Beaufort Sea for use as a camp, lab and hotel. On the east coast the SWATH vessel, FREDERIC CREED, will be used to study surface wave properties off Cape Hatteras.

A publication entitled, "Vessels of the Canadian Coast Guard," was made available to all attendees. This publication provides the particulars of all Canadian Coast Guard ships and cutters.

Natural Environmental Research Council (NERC) - Ken Robertson reviewed the schedules for the NERC vessels DISCOVERY, CHARLES DARWIN, and CHALLENGER as well as the icebreaker JAMES CLARK ROSS (which is largely employed in support of Antarctic bases and also is supporting science for the British Antarctic Survey). They are on the World Wide Web at <<http://www.soc.soton.ac.uk/>> and connected with the Oceanic Data Base.

Ken noted the increased communications requirements the NERC vessels need and indicated that current systems are not adequate to meet these increasing needs. Plans call for replacement of the existing INMARSAT-A system on DISCOVERY with an INMARSAT-B system capable of 64 kbps. On CHARLES DARWIN, they are looking to upgrade the existing INMARSAT-A system to make it capable of 22 kbps. With CHALLENGER, because of its geographic area of operation (frequently around the UK), other options are being examined.

On their research ships there is now an increased need to document procedures for handling, deploying and recovering scientific equipment. The needs of quality management and the coming ISM Code dictate a written procedure for every operation that contains risk analysis and assessment and defines personnel requirements for the activity. Ken cautioned against not underestimating the amount of work associated with this requirement, noting that it is the user of the item and equipment that has to generate the documentation not necessarily the ship owner.

An International Marine Technician Workshop was hosted in Southampton at the end of September. It was attended by 60 people from over 20 organizations. Three main topics for the

workshop were Mooring Technology, Standards and Calibrations, and Fishing Technology. They hope to have the next meeting in the U.S. in 1998 and maybe linked with RVTEC.

American Academy of Underwater Sciences (AAUS) - John Heine of MLML and President of AAUS reported that a revised version of the AAUS standards for scientific diving certification is out and should be made available on UNOLS vessels with diving operations being conducted.

In the last year, the UNOLS Shipboard Diving Safety Manual was reviewed. The only major recommendation was that Marine Superintendents do a complete job of collecting dive statistics. He stated that AAUS would like to get reports on any accidents or diving incidents as well as dive statistics.

John presented statistics on all diving under AAUS diving programs. In 1995, 42,790 scientific dives were conducted by AAUS members. Three to four percent of those dives were made from UNOLS vessels.

SACLANT Undersea Research Center - Chris Gobey reported on the schedule and operations of R/V ALLIANCE which is jointly funded by the 16 NATO nations. This vessel has been in service for eight years and has averaged 230 to 240 days per year. With projected cuts, they will be down to 160 days in 1998.

Instituto de Fomento Pesquero - Enrique Aranda, Jefe Division Operaciones of Valparaiso, Chile, expressed his appreciation for the opportunity to attend the RVOC meetings and stated that his operations have benefited from what he has learned.

Universidad Nacional Autonoma de Mexico - Dr. Inguar Emillson, Instituto de Ciencias del Mar y Limnologia, reported on the schedule and budget problems for the two University of Mexico research vessels. They are each 150 ft. long, have a crew of 15 and can carry 20 scientists. They have been operating at 200 to 240 days per year and are down to around 100 days. He said that the government of Mexico has decided to spend less on ocean research. Dr. Emillson expressed a desire to send his technicians to a U.S. institution, preferably one in the southwest where language may not be as big an obstacle in order to get some practical training.

Baruna Jaya Research Vessel Group - Firdausi Manti and Anny Kustantiny represented the Baruna Jaya Research Vessel Group of BPP Teknologi-Indonesia.

Indonesia is an Archipelgo with 17,508 islands and 5.8 million square km of seas. The purpose of the Baruna Jaya program has been to strengthen Indonesia's efforts in developing marine and ocean inventory and the exploitation and exploration of its territorial waters.

The Baruna Jaya program (*Appendix IV*) was launched with delivery of its first of four vessels beginning in 1989. The four vessels are each 60.4m long with a range of 7500 nm at 12 knots. The Baruna Jaya I was designed for oceanographic research; Baruna Jaya II for hydrographic research, Baruna Jaya III for marine geology and geophysics; and Baruna Jaya IV for fisheries and oceanography. Since 1990, these ships have completed 70 cruises covering most of Indonesia's

territorial waters. Inventorying, processing, and disseminating of data collected on surveys by the vessels is handled by the Baruna Jaya Marine Data Center.

Insurance and Liability - Dennis Nixon, who serves as a Risk Manager for the UNOLS Fleet, reported on some Americans with Disabilities Act (ADA) cases. He stated that some cases under the ADA were appearing in court, although none were maritime in nature. He reviewed some maritime cases and ADA cases.

He then reviewed the previous 1992 attempt to institute a group insurance program and said that it failed for several reasons. There was no incentive for several operators, it required a new structure for a Government purchase of insurance for a mixed fleet, savings were projected but not guaranteed, there was not a driving financial need and the fleet had widely varying coverages. Since then, the fleet has gone to mandated common levels of coverage and deductibles, they have moved to solid carriers and underwriters and generally have lower premiums for more coverage.

Dennis then introduced Richard Haverlin, Michele Gallaego, James F. Hughes III, J. David Fuchs, and Stuart Forsyth representing a collaborative effort by GRE Insurance Group and Global Special Risks, Inc. (a subsidiary of Willis Corroon) that is offering a comprehensive insurance program designed for the research vessel industry.

They conducted a study and identified many aspects of the insurance needs of research vessels: wide ranging navigation limits and operating conditions, specialized and sensitive electronic equipment, underwater exposures including diving among others. They were offering this program to research vessels because they indicated that research vessels have over the years demonstrated a superior record with regard to loss prevention, vessel maintenance, safety standards, and competent crew. The program offers a group affiliation targeting only geophysical, research, oceanographic, and seismic vessels. Access to this program would require no change in the way any organization handles their insurance because the program is available through existing brokers/agents.

Wednesday- 23 October 1996

USF Davis Hall

Continuation of Special Reports

REVELLE (AGOR 24) & NEW HORIZON (Scripps Institution of Oceanography) - Tom Althouse reported on the testing and delivery of REVELLE. REVELLE was accepted on 11 June and transferred to SIO. On 8 July, the vessel departed Pascagoula, MS enroute to San Diego, CA. During the cruise, tests were conducted on the 3.5 khz transducers, 12 kHz transducers and the SeaBeam system. REVELLE arrived in San Diego on 31 July. The dynamic position system was tested on 8-14 August. There are 109 post delivery jobs to be completed. Fuel consumption for REVELLE has been higher than with THOMPSON. At a transit speed of

12.5 kts, REVELLE consumed 4500 gpd. This is being investigated. In 1996, the only funded operating days for REVELLE were 45 days funded by the state of California.

The NEW HORIZON mid-life was completed and the ship returned to service on 1 May. Among those items completed as part of this mid life were installation of a new tunnel type bowthruster and tank modifications. The tank modifications resulted in increased stability permitting NEW HORIZON to carry a deck load of 35 tons and remain at sea for 40 days.

ATLANTIS (Woods Hole Oceanographic Institution) - Joe Coburn reported that ATLANTIS II had been sold. The new ship, ATLANTIS, will be the support ship for ALVIN with NSF, ONR, and WHOI each contributing \$900k for the conversion. The old A-Frame for ALVIN will be refurbished for use. Delivery of ATLANTIS is set for 24 February with five to six weeks required for outfitting and load out in Pascagoula. Deepwater testing of the ship's sensors will be conducted during the delivery cruise to WHOI. ATLANTIS is scheduled to arrive at WHOI on 15 April to take on ALVIN. The first scientific dives are set for June 1997.

Oregon State University (OSU) Support Facility Improvements - Fred Jones reported on the improvements at the OSU facility. These included new pier space, permitting not only the berthing of the 185 ft R/V WECOMA, but a berth for visiting ships up to 300 ft. in length. Dock services include shore power (460v 3 ph, 400 amps), compressed air, telephone, cable TV and potable water. Also in 1996, additional building space was added to the Ship Support Facility which included a new operations building, machine shop, and science staging areas.

University of Connecticut - Robert Degoursey reported on their progress in construction of a new research vessel. They have received a grant from the State of Connecticut Department of Economic Development for this vessel. This new vessel will be replacing their current vessel, a T-Boat that was built in 1953 and had been operated by Scripps until it was transferred to UCONN in 1968. The development of design and specifications has been a two year process. They are now soliciting proposals for construction of this vessel. Vessel design was a collaborative effort between Roger Long and Elliot Bay Design Ltd. A description of the vessel is contained in *Appendix V*. Most of the vessel's operations will be in Long Island Sound. The vessel will be able to carry a total of 12 crew and scientists. For day trips, a crew of two will be required and for extended operations a crew of four. Clientele for this vessel is expected to include the Coast Guard R&D Center, companies located in the region, the National Undersea Research Center and Connecticut scientists.

Skidaway Institute of Oceanography - Steve Carignan reported on Skidaway's efforts to replace BLUE FIN. They have been looking at raising \$2.2 to \$2.5 million in funds for replacement. The good news is that the Board of Regents has approved 75-80% of the funds necessary for building the replacement. The program, however, does require legislative approval. They have been looking into design and engineering of this vessel. They expect the vessel to be approximately 85 ft, fiber glass monohull with a low draft. Their niche is estuary work and most of their work comes from Skidaway Institute, University of Georgia and Georgia Tech.

Western Flyer (MBARI) - Mark Vandenberg reported on the SWATH, WESTERN FLYER.

A two way microwave link is being designed by MBARI that would allow a two ship operation; permitting additional scientists to be involved in WESTERN FLYER's cruise programs and ROV activities.

Mark noted that there is a website on WESTERN FLYER as well as the ROV, TIBURON, for which the WESTERN FLYER acts as the mothership.

MBARI is also investigating a fly-away ROV system for a ship of opportunity.

WESTERN FLYER was launched in November 1995 and arrived in Moss Landing in February 1996 where they finished the outfitting. Science operations are scheduled to begin January 1997. Design goals for this vessel have been achieved. The ship is able to carry a few more tons of payload at a 12 ft draft than was expected. The minimum draft of the vessel is 9 ft 3 inches. Eight knots is the most economical speed. The cruising speed is about 13 kts. The ship has been approved by the Coast Guard as an automated vessel. It has a crew of nine with a scientific party of 17. Their COI permits them to carry a total of 27.

Maritime Health Services - Dr. Mike Brown provided a summation of the services provided to the UNOLS fleet since they began their contract with UNOLS. The bulk of these services is providing medical advice to ships at sea. In the last three years, they have handled 113 cases from UNOLS vessels. This has included four Medevacs.

He also described the training program (SALTS) that MHS provides and how it has benefited several users of their service. This three day class gives CPR certification, a Coast Guard approved first aid training class, and teaches the students how to do basic physical exams, to start an IV and to suture. They try to offer one class per month. Several east coast operators encouraged Dr. Brown to hold at least two training sessions on the east coast.

Dr. Brown described their efforts to define and provide medical supply kits tailored to the type of vessel and service. Most supplies carried are useful and essential.

He described the Mariner's Medical Network. Through this network, they identify doctors who can provide local medical services/physicals to the fleet at negotiated rates around the world. MHS provides this service for several institutions. He expressed a desire to be involved in the pre-employment screening process and the initial physical exams as part of a risk management approach and noted that there are some questions that they as physicians can ask about an applicant's health which employers cannot.

Full Session Discussion: Working With New Partners - This discussion was severely curtailed due to the length of preceding discussions. The NOAA, NAVO and NSF representatives all conveyed what their needs and concerns are and several questions were asked. The most important points made were.

- Early and thorough involvement in the scheduling process by NAVO and NOAA was important to make that process go smoother and to minimize the impact on NSF and ONR supported users in the scheduling process.
- Early and thorough exchange of information between PIs and ship operators needs to take place. The NAVO and NOAA PIs are used to certain levels of support from their own vessels and will have to plan for the different type of support that they may receive on UNOLS vessels. At the same time, UNOLS operators must be prepared to deliver different levels of service if requested and paid for by the new users.

Lunch

TOUR OF FIO MARINE FACILITIES AND VESSELS

WORKSHOPS

Three workshops were scheduled to run for the remainder of the afternoon. These workshops were:

- Medical and Physical/ Functional (Performance) Standards. Chaired by Bill Coste.
- Strategies for maintaining a healthy and productive UNOLS fleet in an era of challenging budgets. How do we measure the effectiveness of the fleet? Chaired by Mike Prince.
- Crew and Scientist training programs. Chaired by Tom Smith.

**Evening at Lowery Park Zoo
Thursday, 24 October 1996
Bayfront Hilton Conference Center**

REPORTS FROM WORKSHOP GROUPS

Medical and Physical/ Functional Performance Standards:

Bill Coste reported for this work group. A summary of the group's discussion is contained in *Appendix VI*. This group benefited from Dr. Michael Brown of Medical Health Services providing input on medical conditions and Mr. Dennis Nixon of URI who addressed the legal aspects. Key issues were:

- A Medical History Questionnaire (MHQ) can be a valuable tool in assisting an examining physician by flagging possible medical problems and determining any laboratory tests to be performed. MHS has agreed to work with the committee in developing a useful MHQ during the coming year.

- Medical Standards - It was agreed to flag conditions which are severe, cannot be corrected, and any examining physician would be able to disqualify an individual without question. Any Medical Standards generated would reflect the desires of our vessel operators at large. State Laws, institution policies, etc., could prohibit the application of these standards in some cases.
- Functional/Physical Requirements will be tied to the need of every crew person to perform emergency duties.

Robert Hinton agreed to take over as Chair of the Medical Standards Committee.

Strategies for maintaining a healthy and productive UNOLS fleet in an era of challenging budgets:

Mike Prince reported for this work group. A summary of the group's discussion is contained in *Appendix VII*. This workshop consisted of a free ranging discussion with a central theme of maintaining a healthy UNOLS fleet in an era of challenging budgets. The key issues discussed were:

- NSF/ABSTECH Inspection Program: There was a consensus that this program is an extremely important component of maintaining a safe and effective fleet and that resumption of the program as soon as possible is a high priority.
- ISM/ISO 9000: ISO will become a requirement for Inspected Research Vessels. In a manner similar to the way that Oil Spill Response Plans were developed, the operators of the inspected vessels and other interested operators will collaborate in the development of the ISM plans.
- Risk Management: One suggestion is that the Inspection Program could include a risk management component. Another method would be to involve the insurance underwriters.
- ORV Regulations: When the fleet starts planning for the replacement of small and intermediate research vessels that are currently uninspected, the effect of current regulations for ORVs and admeasurement would probably result in most new vessels being inspected. A review of the regulations should be conducted.
- Designation as a UNOLS vessel: The UNOLS Council formed a committee to look at this issue with the idea that a lower size limit might be established. The impacts of designating a vessel as a UNOLS vessel are many, including easier access to Ship Ops, Technician and Equipment funding, involvement in the scheduling process, and involvement in the inspection program. Many of these benefits can be achieved without the UNOLS designation. How this issue is settled will have an impact on the overall health of the fleet in the future. Input should be provided to the members of the committee reporting to the UNOLS Council.

Crew and Scientist Training Programs:

Tom Smith reported for this work group. A summary of the group's discussion is contained in *Appendix VIII*. Key issues discussed were:

- The method and procedures to produce a safety orientation film for use aboard UNOLS vessels were addressed.
- Standards for Training and Watchkeeping Certification (STWC) were discussed. Vessels that make foreign port visits are encouraged to obtain them for the ship's crew.
- ISO 9000 requirements were also discussed. European operators reported on their experience with the system.

ROUND TABLE DISCUSSION

Marine Superintendents or their equivalents from member and guest organizations met to discuss issues of mutual interest. A summary of the topics discussed included:

- INMARSAT B, A, M, C, SeaNet, Sky Cel and other communications systems.
- E-mail procedures and charges.
- ECDIS and Electronic Charting System equipment.
- STWC certificates.
- Smoking on R/Vs.
- Medical Contract.
- Inspection Program.
- UNOLS membership.
- GMDSS, training courses and equipment.
- Digital Television Systems.
- Standard inport services and charges.
- Post cruise evaluations of research vessels.

Lunch

CONTINUATION OF ROUND TABLE

BUSINESS MEETING

Paul Ljunggren of LDEO was nominated and unanimously elected as RVOC Chair.

Robert Hinton of University of Washington and Steve Rabalais from LUMCON were nominated for Vice-Chair. Steve Rabalais was elected as Vice-Chair.

Assignments to committees, panels and work groups:

- Tom Smith continues as Chair of the Safety Committee. Members include Joe Coburn, Tim Askew, Steve Rabalais, Bill Hahn, and Tom Althouse.
- Tim Askew will be liaison to RVTEC this year and Noe Cantu may fill the roll in the future.
- Joe Coburn will continue for another year as liaison to the FIC and to the AICC.
- Linda Goad and Mike Prince will collect information from operators regarding charges for services over and above the daily rate, including but not limited to inport logistic charges, technician and equipment charges.
- Steve Rabalais will remain on the UNOLS subcommittee regarding designation of a UNOLS Research Vessel.

The following action items are pending:

- Preparation of a proposal for a Safety Training Video.
- Safety Committee to begin review of the Research Vessel Safety Standards.
- Mike Prince will prepare a letter to Ken Johnson and Don Heinrichs regarding the Ship Inspection Program.
- Review of the Inspection Program RFP by individual operators and submission of comments to the UNOLS Office.
- Mike Prince will prepare letter to Ken Johnson and Jack Bash regarding the Medical Services Contract.
- Individual operators are to provide Mike Prince costs of changing to a new Medical Services Provider.
- Final Draft of Medical and Performance Standards.
- Shift accident reporting statistics to the UNOLS Office.
- Respond to questionnaire on salaries. Paul Ljunggren will compile results from the responses.
- Linda Goad and Mike Prince will prepare a questionnaire on fleet charges and compile a summary report of the responses.
- Dave Powell and contributors will work on Small R/V Primer.
- Operators are to provide comments to Steve Rabalais on UNOLS vessels designation issue.

Woods Hole Oceanographic Institution was chosen as the host for the 1997 RVOC meeting and the University of Hawaii was chosen as the site for the 1998 meeting.

Appendix IX provides a chronological list of past RVOC meetings.

Adjournment

The RVOC wishes to express its thanks to Gene Olson, Dr. John Ogden of FIO, Dr. Winston Bridges of USF, and the staffs of Florida Institute of Oceanography and University of South Florida for hosting this year's meeting.

APPENDIX I



1996 RVOC Meeting Agenda

0800 Tuesday, 22 October 1996
USF DAVIS HALL Room 130

0800 REGISTRATION AND COFFEE

Spouses will meet at 0900 in the Bayfront Hilton Lobby
(Transportation available from Heritage to Hilton)

0830 WELCOMING REMARKS

- Eugene Olson, Marine Superintendent, Florida Institute of Oceanography
- Dr. John Ogden, Director, Florida Institute of Oceanography
- Mike Prince, Chairman, RVOC
- Paul Ljunggren, Vice-Chair, RVOC

0900 OLD BUSINESS

- Minutes of the 1995 Meeting
- Post Cruise Evaluations
- Van Study, final review
- Medical Standards/Job Descriptions
- White paper on the benefits of the University operated research fleet.

0930 NEW BUSINESS

- Primer on small research vessels
- Safety Video for scientists
- Size limit on UNOLS vessels, UNOLS Committee
- New contract for UNOLS fleet inspections

1000 COMMITTEE AND LIAISON REPORTS

- UNOLS, Jack Bash & UNOLS Chair, Dr. Ken Johnson (MLML)
- Safety Committee, Tom Smith
- RVTECH, Steve Rabalais
- FIC & AICC, Joe Coburn

1100 AGENCY REPORTS

- National Science Foundation - Dolly Dieter
- Naval Oceanographic Office - CDR Jim Trees
- NOAA - Capt. Martin Mulhern and/or Elizabeth White
- USCG - CDR Rick Rooth
- U.S. State Department - Tom Cocke
- Others

1145 LUNCH (AVAILABLE AT USF BAYBORO CAFETERIA NEXT DOOR)

1996 RVOC Meeting Agenda

1300 Tuesday, 22 October 1996 (continued)
USF Davis Hall Room 130

1300 FINISH AGENCY REPORTS FOLLOWED BY SPECIAL REPORTS

- Florida Institute of Oceanography
- Representatives from other countries and organizations
- Don White, Rod Stright and Dale Gibb, Canadian Coast Guard
- Ir. Anny Kustantiny MBus. and Ir. Firdausi Manti- Indonesia - Baruna Jaya Research Vessels Group
- REVELLE (AGOR 24) - Tom Althouse
- ATLANTIS (AGOR 25/ALVIN support vessel) - Joe Coburn
- OSU Support Facilities improvements - Fred Jones
- Univ. of Connecticut R/V - Larry Burch
- New vessel for Skidaway - Steve Carignan
- WESTERN FLYER - Mark VandenBerg/MBARI
- Diving Safety issues - John Heine - AAUS
- Any other operators with special reports

1500 INSURANCE AND LIABILITY

- Report by Dennis Nixon on liability and insurance issues including a report from marine insurance underwriter.

1715 ALEXANDER THE GREAT EXHIBIT AT INTERNATIONAL MUSEUM

OR

1830 DINNER DANCE CRUISE TILL MIDNIGHT

OR

DINNER ON YOUR OWN OR WITH FRIENDS

1996 RVOC Meeting Agenda

0830 Wednesday, 23 October 1996
USF DAVIS HALL Room 130

0830 MARITIME HEALTH SERVICES

- Report by Dr. Mike Brown on medical support issues

0930 FULL SESSION DISCUSSION: WORKING WITH NEW PARTNERS

Discussion about changes within NOAA, the plans for NOAA use of the UNOLS fleet and the impacts on our operations. Discussion of the plans for UNOLS support of the Naval Oceanographic Office (NAVOCEANO) through the National Oceanographic Partners Act (NOPA) including the type of work anticipated and special requirements for carrying out this work. Working for NOAA and NAVOCEANO raises the possibility of UNOLS vessels engaging in fisheries research, mapping and charting and other non-traditional types of work. Are we prepared for these types of missions? Should one or more vessels be modified to better serve these missions? How do we work with these other federal, state and private agencies and maintain our normal support for traditional users of the UNOLS fleet? What are the impacts on NSF and ONR supported research?

1130 LUNCH AND TOUR OF MARINE FACILITIES AND VESSELS AT FIO

1330 WORKSHOPS

- **Medical and Functional (Performance) Standards (Bill Coste)**

A committee chaired by Bill Coste will meet to review and refine draft medical standards and draft physical/functional requirements (performance standards) to be used by UNOLS operators in job descriptions and for physical examinations given to shipboard employees. Persons not on the committee are welcome to attend and participate in this session, however, the committee will be responsible for approving the final draft which will be forwarded to the entire RVOC for approval.

- **Strategies for maintaining a healthy and productive UNOLS fleet in an era of challenging budgets. How do we measure the effectiveness of the fleet? (Mike Prince)**

A discussion about how operators can continue to operate safe and effective research vessels that will meet the fluctuating needs of the academic science community in an era of steady or declining budgets. Included will be a discussion of the standards that vessels should be held to and how to measure the effectiveness of the fleet and individual vessels in meeting these standards. Identify areas where the RVOC is currently promoting a healthy UNOLS fleet and what new directions RVOC should take in the future.

- **Crew and Scientist training programs (Tom Smith)**

The RVOC Safety Committee and other interested participants will work on the development of an Orientation/Safety video for scientists. As time permits they will also discuss other topics related to training and safety on UNOLS research vessels including the implementation of the 1995 Amendments to the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers, 1978 (STCW) by the USCG.

1900 EVENING AT THE LOWRY PARK ZOO (DINNER AND SOCIAL HOUR TILL 10PM)

October 18, 1996

1996 RVOC Meeting Agenda

0830 Thursday, 24 October 1996
Bayfront Hilton Conference Center

0830 REPORTS FROM WORKSHOP GROUPS AND OTHER UNFINISHED BUSINESS

1000 ROUND TABLE DISCUSSION

Marine Superintendents will select and discuss topics of mutual interest.

Please submit a list of items that you would like to discuss, other items will be developed during the course of the meeting.

Some items already suggested:

- The future of the National Weather Service and the effects on marine forecasts.
- Progress made in terms of regulations specifically GMDSS- Radio Officers and the associated federal regulations.
- Post cruise evaluations of research vessels
- Inmarsat B and SEANET. What does it have to offer us.
- ECDIS equipment
- Marine insurance program for Research Vessels

1200 LUNCH

1300 CONTINUE ROUND TABLE

1400 BUSINESS MEETING

- Nomination and Election of New Chairman and Vice-Chairman
- Assignments to committees, panels and work groups
- Review of action items pending
- Suggestions for the 1997 Agenda and meeting format
- (PLEASE USE ATTACHED WORKSHEET TO PROVIDE YOUR WRITTEN INPUT)
- Vote on host for 1997 and 1998 meeting.

1500 ADJOURN

1996 RVOC Meeting Agenda

NEXT YEAR'S RVOC MEETING

Please use this form before and during the meeting to record any suggestions you may have for next years meeting.

Suggestions for agenda items, workshops or guest speakers

Suggestions for changes or improvements to the meeting format or schedule



APPENDIX II



RVOC CONFERENCE - OCTOBER, 1996

NAME	INSTITUTION	ADDRESS	PHONE / FAX / E-MAIL
Althouse, Tom	University of California, San Diego, Scripps Institution of Oceanography Nimitz Marine Facility	297 Rosecrans St San Diego, CA 92106	(619)534-1643 (619)534-1635 capt@mpl.ucsd.edu
Armanda, Enrique	I.F.O.P.	Jefe Divison Operaciues Marinas HVITO 374 Valpariso, Chile	(32)239575 (32)213178
Askew, Tim	Harbor Branch Oceanographic Inst.	5600 US 1 No. Ft. Pierce, FL 34946	(561)465-2400 x 262 (561)465-2116 taskew@hbol.edu
Bash, Jack	IUNOLS	P.O. Box 392 Saunderstown, RI 02874	(401)874-6825 (401)874-6486 bash@gso.url.edu
Black, Lee	Bermuda Biological Station for Research	Ferry Reach St George's, Bermuda	(441)297-1880 x 208 (441)297-1839 lblack@bbsr.edu
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Burch, Larry	University of Connecticut Marine Science & Tech Ctr	1084 Shennecossett Rd Groton, CT 06340-6097	(860)405-9178 (860)449-8085 burch@uconnvm.uconn.edu
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Carignan, Steven	Skidaway Institute of Oceanography University System of Georgia	10 ocean Science Circle Savannah, GA 31411	(912)598-2456 (912)598-2310 steve@skid.peachnet.edu
Clark, Bill.	University of Hawaii	#1 Sand Island Rd Honolulu, HI 96819	(808)847-2661 (808)848-5451

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Coburn, Joe	Woods Hole Oceanographic Institution	Mall Stop #27 Woods Hole, MA 02543	(508)289-2624 (508)540-8675 jacoburn@whoi.edu
Cocke, Tom	U.S. Dept of State	OES/OA RM 5805 Washington, DC 20520	(202)647-0240 (202)647-1106 tcocke@state.gov
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Emilsson, Inguar	ICM y L, UNAM	A.Postal 70-305,C.P. 04510 Mexico, D.F. ,Mexico	(52-5)622-5777 (52-5)622-5809 buques@mar.icmyl.unam.mx
Firdausi, Mantl	JL.M.H.Thamrin No.8	BppTeknologi Building 18th Fl. Jakarta 10340 Indonesia	(62-21)316-8818 (62-21)316-9720 bibil@tsda.pka.bppt.go.id
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Gobey, Chris	Saclant Undersea Research Center	V. San Bartolomeo 400 19138, La Spezia, Italy	39 187 540 219 39 187 524 163 gobey@saciantc.nato.int

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Stone, Paul	Marine Superintendent Southampton Oceanography Cntr.	Empress Dock Southampton, S0143ZH, U.K.	(44)1703-596285 (44)1703-596295 paul.stone@soc.soton.98.uk.
Stright, Rod	Canadian Coast Guard	P.O. Box 1000 Dartmouth, Nova Scotia Canada B2Y 32B	(902)426-6146 (902)426-6977
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Wight, Don	Director of Fleet Services Canadian Coast Guard	Dept of Fisheries & Oceans 344 Slater St - 7th Fl Ottawa, Ontario Canada KIA0N7	(613)993-8659 (613)990-0341
Wilkes, Gordon	NAVOCEANO N3W	Stennis Space Center, MS	(601)688-4376 (601)688-5602 gwilkes@navo.navy.mil



APPENDIX III



POST CRUISE ASSESSMENT REPORT (10/17/96)

Please complete and E-Mail to (email for Marine Supt. or other institution representative) and unols@gsosun1.gso.uri.edu

- 1) Ship's Name:
- 2) Cruise dates:
- 3) Chief Scientist:
Master:
Marine Technician:
- 4) Name of project/cruise, cruise or leg #:
- 5) Type of work:
- 6) Area of Operations:
- 7) Were the science objectives of this cruise met? yes no
Please explain, especially if objectives were not met.
- 8) Number of days lost: Reasons for lost days:
- 9) Are there changes you would recommend before this ship is used again for this or similar projects that would improve either the safety of the operation or the results ?
- 10) Any suggestions for improving the pre-cruise planning and coordination, logistics, shore support or living conditions on the vessel.
- 11) Any comments or praise regarding the vessel's operation, equipment, ship's personnel, technicians, shore support or science party.
- 12) Name/position of person completing this form:
- 13) Return e-mail address (or alternate method for response):
- 14) If there are important questions you would rather communicate orally please feel free to call the Marine Superintendent (Ph #) or the executive director of UNOLS (401-874-6825).



APPENDIX IV



Baruna Jaya Research Vessels

Baruna Jaya Research Vessels Fleet is managed by Directorate of Technology for Natural Resources Inventory under the Deputy for Natural Resources Development of The Agency for The Assessment and Application of Technology (BPP Teknologi). The mission of the fleet is to formulate the policy, to coordinate and to conduct the assessment and application of National Marine Science and Technology and also to provide marine technology services.

Since 1989, BPP Teknologi manages four research vessels (Baruna Jaya I, II, III and IV) with 50 experts from many different field of studies. The main characteristics of the vessels are length overall 60.4 m, breadth 11.6 m, draft 4.5 m, gross tonnage 700 TX and classification from Bureau Veritas 3/3 E and from Biro Klasifikasi Indonesia (BKI).

Field of services consist of oceanography, hydrography, geology, geophysics, fishery and environmental survey such as :

- Marine resources investigation
- Offshore engineering
- 3D's topographic mapping
- Shallow Coastal waters, deep sea bathymetric
- Seismic
- Preliminary exploration for oil, gas and mineral
- Pipeline/Cable route
- Rig sites studies and platform locations
- Harbor development and maintenance
- Fishstock assessment
- Marine pollution and oil spill management



To support these services Baruna Jaya Research Vessels Fleet has a high-tech equipment and facilities, such as :

- Navigation (GPS, Syledis)
- Physical Oceanography Equipment
- Seismic Equipment
- Heat-Flow System
- Under Water Camera
- Geological Sampling System
- Shallow and Deep-Sea Sounding Equipment
- Weather Station
- Chemical & Physical Labs
- Fish Finder
- Multibeam
- Inmarsat-C

R/V Baruna Jaya I



R/V Baruna Jaya II



R/V Baruna Jaya III



R/V Baruna Jaya IV



The Management of R/V Baruna Jaya Fleet

Directorate of Technology for Natural Resources Inventory (Dit. TISDA)
Agency for The Assessment and Application of Technology (BPP Teknologi)

BPP Teknologi Building I-18th Floor
and Building II-19th Floor
Jl. M.H. Thamrin No. 8
Jakarta 10340 - Indonesia

Phone : (62-21) 316 9731, 316 9739
316 8805, 316 8818
Fax : (62-21) 310 8149, 310 9720
E-mail : pkbj@tisda.pka.bppt.go.id

Baruna Jaya RAW Fleet

Baruna Jaya I	⇒	Oceanographic research
Baruna Jaya II	⇒	Hydrographic research
Baruna Jaya III	⇒	Geology and geophysics research
Baruna Jaya IV	⇒	Fishery and oceanographic research

Related Research	:	
Baruna Jaya I & IV	:	Marine Resources Inventory, Fish Stock Assessment.
Baruna Jaya II	:	Physical, Chemical, Biology parameter of sea water
Baruna Jaya III	:	Bathymetric & Mapping Surveys, Wreck Investigation
	:	Minerals & Hydrocarbon Investigation etc.



ARMADA KAPAL RISET BARUNA JAYA

Main Characteristics

Length overall	60.4 m
Length between P.P	55.3 m
Breadth	11.6 m
Depth at upper deck	6.5 m
Displacement	1200 T
Gross tonnage	700 TX

Range

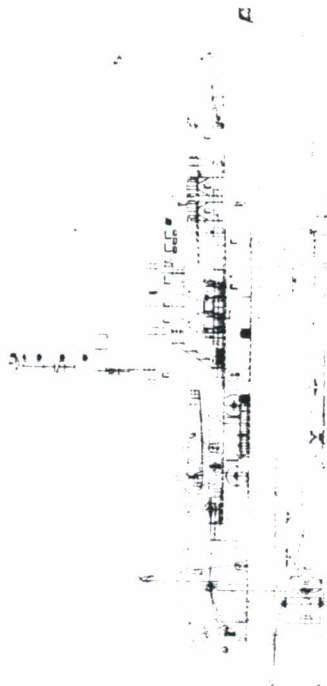
7500 NM at 12 knots

Classifications

Bureau Veritas 1 3/3 E. Research

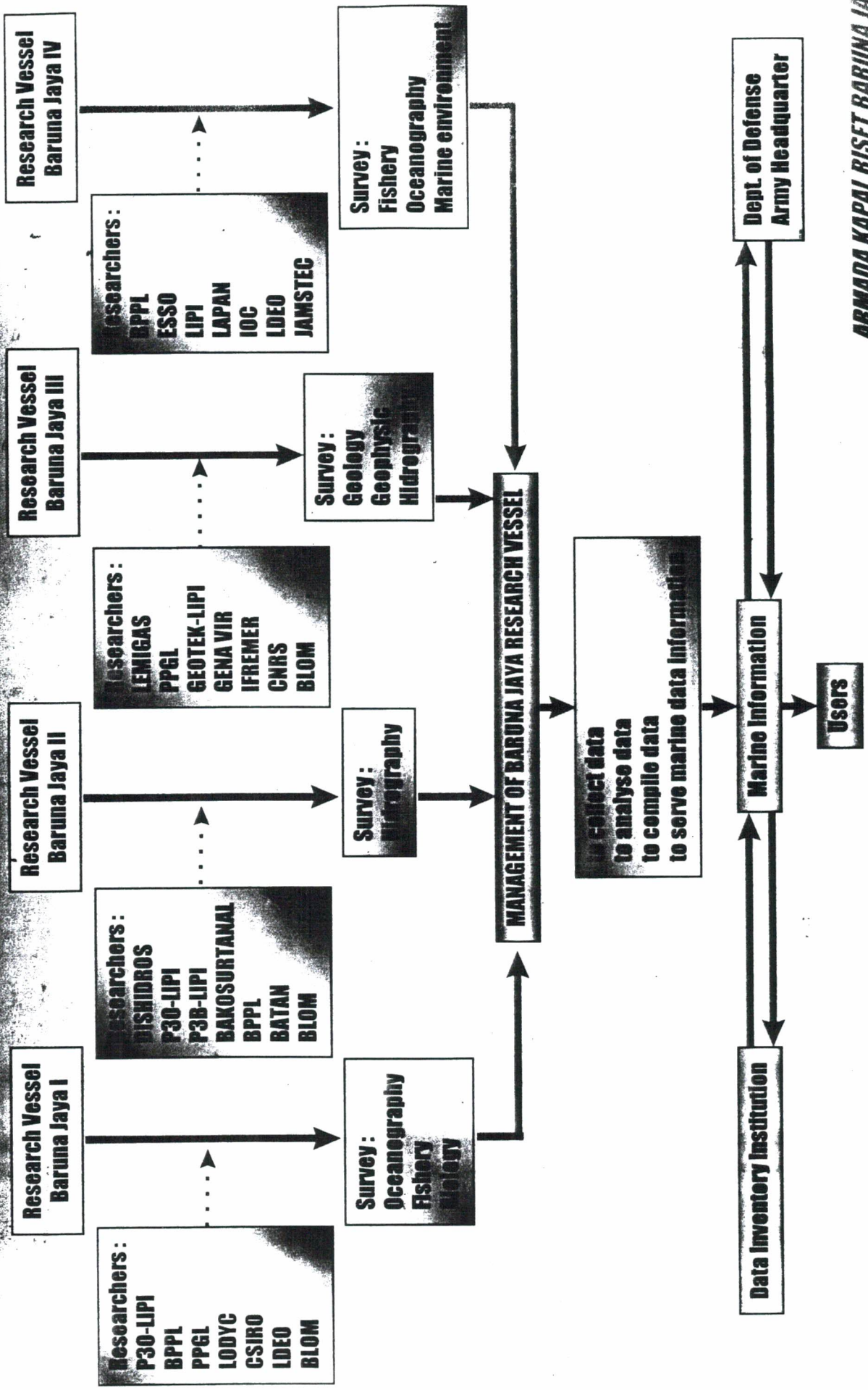
special ship Deep sea & Biro

Klassifikasi Indonesia A 100 IMS



ARMADA KAPAL RISET BARUNA JAYA

Flow of Information of Baruna Jaya Marine Data



ARMADA KAPAL RISET BARUNA JAYA

Baruna Jaya Marine Data Center

Objectives :

- **To develop integrated marine data base in a computerised network system**
- **To develop effective and efficient technology for marine data processing**
- **To develop man power capability in marine data management**
- **To produce and disseminate marine data and information to government institutions and civilian community**
- **To provide training courses for government and private institutions and the community**

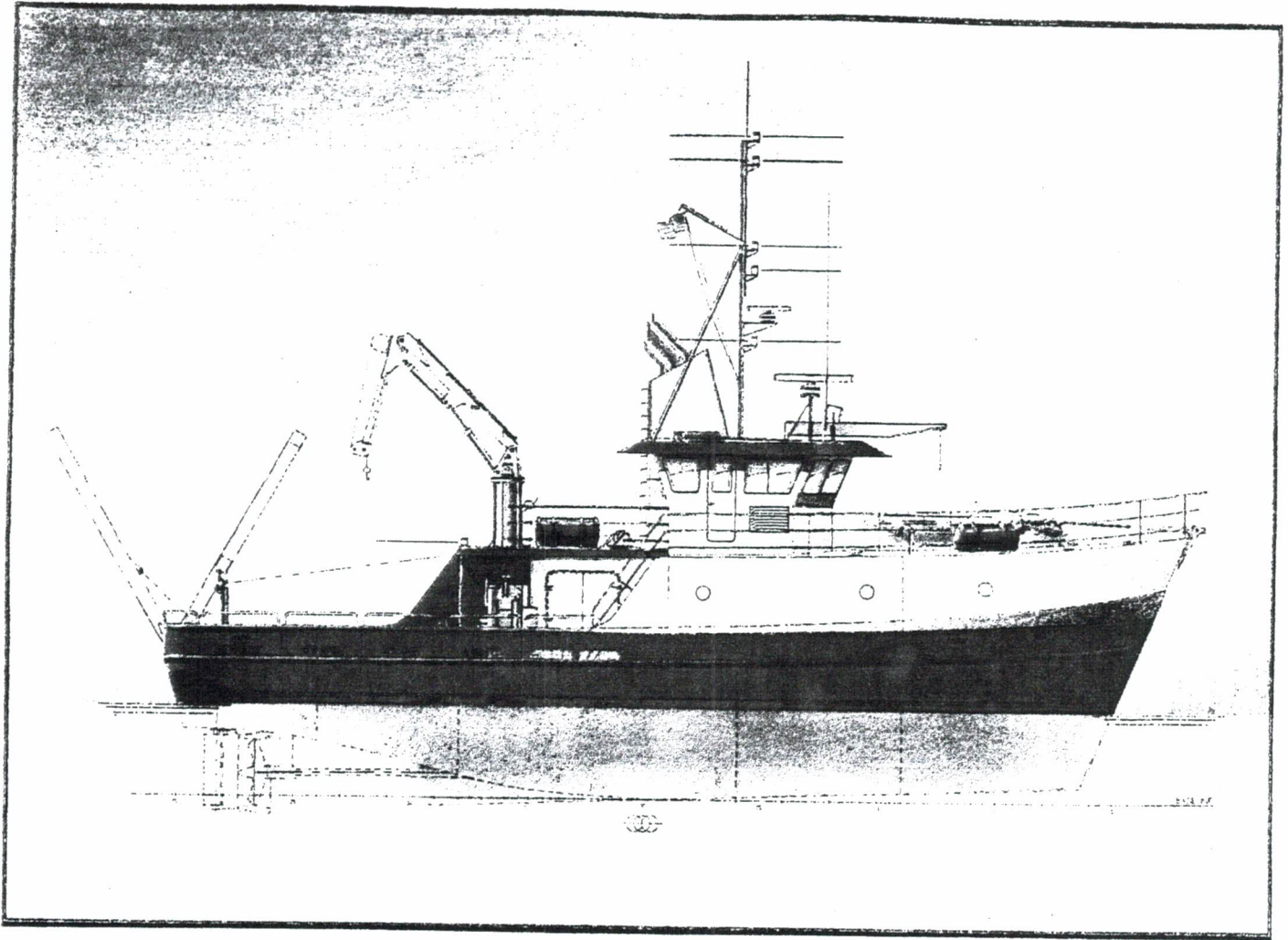


ARMADA KAPAL RISET BARUNA JAYA



APPENDIX V





Length OverAll	76'-6"	Propulsion	835 BHP
Length DLWL	70'-0"	Fuel Capacity	5500 Gal
Beam	26'-0"	Fresh Water	2490 Gal
Draft	7'-0"	Accommodations	11

ELLIOTT BAY DESIGN GROUP, LTD.

NAVAL ARCHITECTS

Seattle, Washington

MARINE ENGINEERS

76'-6" OCEAN RESEARCH VESSEL



APPENDIX VI



MEDICAL STANDARDS WORKSHOP

The Medical Standards Workshop addressed a variety of subjects. Which centered on the draft Medical History Questionnaire, the draft Medical Standards, and the draft Performance Standards. We were fortunate to have present Dr. Michael Brown from Maritime Health Services, speaking for the medical community, and Mr. Dennis Nixon from URI, who addressed the legal aspects. Dr. Brown's ability to decipher the various medical terms, explain the diseases in laymen's terms and his presentation of actual cases which MHS has encountered in the past, were most informative and instructive.

Medical History Questionnaire. We reached agreement that the MHQ can be a valuable tool in assisting an examining physician by flagging possible medical problems and determining which (if any) additional laboratory tests should be performed. A good MHQ could also prove useful if the employer gets involved in a preexisting condition which was not reported on the MHQ. The issue is what sorts of questions, to what depth, can be asked within an acceptable ethical and legal frame work. There are a number of good MHQ's available: such as the MHS questionnaire, Military Medical History questionnaire, Duke University's questionnaire, etc. MHS has agreed to work with the committee in developing a useful document, legally acceptable, during the coming year.

Medical Standards. We accomplished a great deal regarding Medical Standards. Primarily, we agreed that we should flag all conditions which would be disqualifying for any employee, whether new hire or an old timer. These conditions are severe, uncorrectable, and any examining physician would be able to disqualify an individual without question. The remaining conditions, which may disqualify an employee from going to sea, would have to be analyzed on a case-by-case basis. Those persons would be referred to a central screening facility (MHS at present) for their recommendation. Based on available data, MHS could recommend full duty status, disqualification from sea duty until the condition is cleared up, disqualification for employment, or additional tests. We agreed that any Medical Standards generated would reflect the desires of our vessel operators at large. State Laws, institution policies, etc., could prohibit the application of these standards in some cases. Also, depending on local policy, the Marine Superintendent could waive certain standards under unique circumstances. However, it would be very risky for an operator of a UNOLS vessel to disqualify an employee using more stringent standards than those approved by both RVOC and UNOLS.

Functional/Physical Requirements. Possibly due to either the late hour or waning interest, there was very little discussion regarding these requirements. Of note is that it appears acceptable for functional requirements to be tied in to the need for every crew person to perform emergency duties.

Robert Hinton agreed to take over as Chair of the Medical Standards Committee. He is the logical choice since MHS is also located in the Seattle area.

Attendees:

P. Ljunggren-LDEO-marsupt@ldeo.columbia.edu; F. Jones-OSU-jonesf@ucs.orst.edu;
L. Burch-U of Conn.-burch@uconnvm.uconn.edu ; P. Sacks-Sea Ed. Association
psacks@sea.edu; D. West-Smithsonian-ocypode@panama.phoenix.net; B. Hahn-URI-
b_hahn@gsosun1.gso.uri.edu; R. Hinton-UW-hinton@ocean.washington.edu ; D. Nixon-
URI/UNOLS-dnixon@uriacc.uri.edu ; M. Brown-MHS-medico@medico.seanet.com; B.
Coste-UHI-snug@poha.soest.hawaii.edu



APPENDIX VII



STRATEGIES FOR MAINTAINING A HEALTHY AND PRODUCTIVE UNOLS FLEET IN ERA OF CHALLENGING BUDGETS

This workshop consisted of a free ranging discussion with a central theme of maintaining a healthy UNOLS fleet in an era of challenging budgets. The concept was to hold a brainstorming session and discussion with the goal of identifying issues and areas that RVOC should focus on in the future. The key issues discussed are outlined below.

1. NSF/ABSTECH Inspection Program: There was a consensus that this program is an extremely important component of maintaining a safe and effective fleet and that resumption of the program as soon as possible is a high priority. The RVOC should review the RFP being prepared by the UNOLS office and should comment on whether the UNOLS office or NSF should contract for and administer the inspection program. Additional points made are that RVTEC should be involved in setting the standards with regard to proper science outfitting of UNOLS vessels and that the Inspection program should incorporate strong procedures for review and follow-up so that discrepancies are dealt with in a timely manner. The format of the inspection reports should be designed to remove redundancy and focus attention on key areas that need correction and to identify areas that are in good shape.
2. ISM/ISO 9000: ISM will become required for Inspected Research Vessels by 1998. In a manner similar to the way that Oil Spill Response Plans were developed the operators of the inspected vessels and other interested operators will collaborate in the development of the ISM plans and will share the results with the rest of RVOC. SIO and WHOI will likely develop plans for their smaller vessels and these can become templates for the other uninspected vessels in the fleet. ISM plans will include standard operating procedures (SOP) for the deployment of scientific equipment and other evolutions. RVTEC has already started to look at writing standard operating procedures for the deployment of science equipment. Operators, techs and scientists will have to collaborate to develop the SOP's for the use of standard and unique equipment for each ship in the fleet. Once an SOP has been written for a piece of equipment on one ship it should be shared so that it can be modified for use on other ships. Many of the European Research Vessel operators have already instituted ISM programs and input from them should be sought in developing our plans.
3. Risk Management: There was a discussion about risk management programs. One suggestion is that the Inspection Program could include a risk management component. The other method would be to involve the insurance underwriters, especially if UNOLS moves to a single insurance program. The insurance providers could provide a risk management evaluation and risk reduction program as part of their coverage. The medical services contractor has also expressed an interest in developing a risk management assessment based on an evaluation of injuries and illnesses occurring on our vessels.
4. ORV Regulations: A review of the Oceanographic Research Vessel regulations should be considered in the near future. When the fleet starts planning for the replacement of small and intermediate research vessels that are currently uninspected, the effect of current regulations for ORV's and admeasurement would probably result in most new vessels being inspected. It is probably not too soon to evaluate the pros and cons of the current regulations and to consider providing input to the funding agencies, the Coast Guard and Congress on any changes that we feel should be considered. It was also suggested that RVOC should look at the issue of whether or not some or all of the UNOLS research vessels should be public vessels and what the ramifications of that designation would be.

5. Designation as a UNOLS vessel: A long discussion about the issue of what criteria should be used to make the decision to designate a vessel as a UNOLS vessel took place. This was a result of the fact that the UNOLS council formed a committee to look at this issue with the idea that a lower size limit might be established. The impacts of the decision to designate a vessel as a UNOLS vessel are many, including easier access to Ship Ops, Tech and Equipment funding, involvement in the scheduling process, and involvement in the inspection program. Many of the benefits of being a UNOLS vessel can be achieved without the designation, such as use of the UNOLS Research Vessel Safety Standards, participation in RVOC meetings and access to ship operating funds through individual science program managers. With out solving the issue it was determined that how this issue is settled will have an impact on the overall health of the fleet in the future and that everyone should provide input to the members of the committee that will report to the UNOLS council. (Bob Wall, chair, Tom Royer and Steve Rablais)

APPENDIX VIII



Crew and Scientist Training Programs

This workshop explored the method and procedures to produce a safety orientation film for use aboard UNOLS vessels. It was decided that a generic film should be produced of approximately 12 minutes duration. The film should cover the content of Chapter One of the RVOC Safety Manual. It will address the science party as its audience and shall display women in scientific roles. It would have a serious tone, attempt to demonstrate the dangers discussed, and remind science personnel of the need to advise the ship of their medical history and any prescribed medicine that someone is taking. WHOI will prepare a proposal for submission to NSF for funds to produce the film. A schedule was proposed as follows: (a) Early January 1997-Proposal submitted to NSF, (b) April 1997 - Contract Award, (c) October 1997- Film Completed.

Standards for Training and Watchkeeping Certification were discussed. All operators indicated that none of their vessels were asked to produce the certificates when calling in a foreign port. It is easily obtained from the US Coast Guard's Marine Inspection Office. Vessels that make foreign port visits are encouraged to obtain them for the ship's crew.

ISO 9000 requirements were also discussed. European operators discussed their experience with the system. The consensus was that this will become a big issue in the near future.

Attendees: Tom Smith, Joe Coburn, Tim Askew, Chris Gobey, Dr. Inguar Emilsson, Firdausi Manti, Anny Kustantiny, Ken Robertson.



APPENDIX IX



Research Vessel Operators Committee Chronological List of Meetings

Year	Date(s)	Institution/Facility	Location
1962	April 25	U.S. Coast Guard headquarters	Washington, D.C.
	May 17-18	Department of Labor	Washington, D.C.
	June 5	American Chemical Society	Washington, D.C.
1963	June 4	Merchant Marine Institute	New York, NY
1964	January 9	Woods Hole Oceanographic Institution	Woods Hole, MA
1965	February 9,10	University of Miami	Miami, FL.
		Institute of Marine Science	
1966	April 21,22	Statler Hilton	Washington, D.C.
1967	April 12,13	National Academy of Sciences	Washington, D.C.
1968	February 15,16	Scripps Marine Facility Division	San Diego, CA
1969	March 20,21	U.S. Naval Academy	Annapolis, MD
		Chesapeake Bay Institute	
1970	April 30, May 1	University of Washington	Seattle, WA
1971	October 20	Lamont-Doherty Geological Observatory	Palisades, NY
1972		Marine Technology Society	Washington, D.C.
1973	November 27,28	Texas A&M Marine Facility	Galveston, TX
1974	November 20	Oregon State University	Newport, OR
1975	October 21,22	Latham Smith Lodge	Sturgeon Bay, WI
		Peterson Boat Works	
		University of Rhode Island	Narragansett, RI
1976	November 30, December 1	Sweet Meadows Inn	
1977	November 1,2	Woods Hole Oceanographic Institution	Woods Hole, MA
1978	October 2	Queen Mary	Long Beach, CA
1979	October 22,23	Scripps Institution of Oceanography	San Diego, CA
		Nimitz Marine Facility	
1980	October 27,28	University of Texas	Galveston, TX
		Marine Science Institute	
1981	October 15	Duke University Marine Laboratory	Pivers Island, NC
1982	September 27,28	Harbor Branch Foundation, Inc.	Fort Pierce, FL
1983	October 4-6	University of Hawaii	Honolulu, HI
1984	October 15-17	Bermuda Biological Station	St. Georges, Bermuda
1985	September 25-27	Moss Landing Marine Laboratory	Moss Landing, CA
		Navy Postgraduate School	Monterey, CA
		Monterey Marine Aquarium	
1986	October 8-10	Oceanografia-Veracruz	Veracruz, Mexico
		Mexican Naval Academy	Anton Lizardo, Mexico
1987	October 12-14	University of New Hampshire	Durham, NH
1988	October 4-6	University of Washington	Seattle, WA
1989	October 3-5	University of Miami	Miami, FL
1990	October 9-11	LUMCON	New Orleans, LA
		Dauphine Orleans Hotle	
1991	October 10-12	Institute of Ocean Sciences	Sidney, B.C. Canada
		Empress Hotel	
1992	October 20-23	University of Delaware	Lewes, DE
		College of Marine Studies	
1993	October 26-28	Texas A& M University - Galveston	Galveston, TX
		Holiday Inn on the Beach	
1994	October 25-27	Skidaway Institute of Oceanography	Savannah, GA
		Days Inn - Downtown	
1995	October 24-26	Scripps Institute of Oceanography	San Diego, CA
		Kona Kai Resort & Marina	
1996	October 22-24	Florida Institute of Oceanography/	St. Petersburg, FL
		University of South Florida	

1997

Woods Hole Oceanographic Institute

Woods Hole, MA