

UNOLS Research Vessel Operators' Committee Meeting
October 15, 16, 17, 2002
Hosted by
Moss Landing Marine Laboratories
and
Monterey Bay Aquarium Research Institute
Moss Landing, CA

Meeting Summary Report

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Minutes of the 2002 Annual RVOC Meeting

Tuesday, Oct. 15, 2002

Monterey Bay Aquarium Research Institute

Wednesday, Oct.16 and Thursday, Oct 17, 2002

Moss Landing Marine Laboratories

Moss Landing, CA

Welcoming Remarks

Steve Etchemendy, Marine Superintendent, MBARI, welcomed the RVOC participants to the MBARI facility in Moss Landing. Steve pointed out that MBARI was a place where scientists and engineers worked together. Steve also pointed out the direct video link via microwave TB to the R/V POINT LOBOS, which allowed continuous monitoring of ROV/ship operations from shore.

Rich Muller, Marine Superintendent, MLML also welcomed the RVOC participants to the 40th annual jointly sponsored RVOC meeting. Rich said that the meetings would be split up at the two facilities located in Moss Landing. He proceeded to introduce Dr. Kenneth Coale, Director of Moss Landing Marine Laboratories.

Dr. Coale stated that MLML was started in 1956 and has grown into a major consortium of 26 institutions with a budget of \$200 million per year for marine science. He emphasized that RVOC understood the relationship of oceanographers and marine scientists.

RVOC Chair Remarks

Steve Rabalais, LUMCON, Chair of the Research Vessel Operators Committee welcomed everyone to the annual meeting. He indicated that we had a full schedule of agenda items even with a few of the presentations being deferred. Steve turned the floor over to the attendees to introduce themselves prior to a discussion on old business.

Agenda

The meeting followed the Agenda Outline in [Appendix I](#). Attendees are listed in [Appendix II](#).

Old Business

Steve Rabalais held a short discussion on the 2001 meeting minutes and a motion to accept the minutes was made and seconded and passed.

Mike Prince reported the RVOC/RVTEC joint meeting was discussed with regard to frequency and it was recommended that joint meetings would be held when necessary and not necessarily on a regular schedule (3-5 years was suggested). Everyone thought it was a successful forum for exchange of information, ideas and common interests. Only five institutions felt that they could hold such a meeting and that more time was needed to conduct regular business.

A brief discussion was held on group purchases by Steve Rabalais on safe boats and gas detection meters and by Matt Hawkins (UDEL) on science vans. Other group purchases mentioned by Dolly Dieter were: Immersion suits, slip rings and radars. It is an advantage to be able to have a group purchase.

New Business

Committee and Liaison Reports

Mike Prince, Executive Secretary, UNOLS, gave a short history of UNOLS starting with its inception in 1962. He also stated that Dolly Dieter was the RVOC Chair in 1985 when Moss Landing Marine Laboratories previously hosted the meeting. Since that time, there are many new members. Mike reported on the recent UNOLS elections held in Sept. at NSF. Dr. Tim Cowles, Oregon State, was elected as Chair replacing Dr. Bob Knox, SIO. Dr. Peter Wiebe, WHOI, was elected Vice-Chair/Elect to replace Tim Cowles. The Vice-Chair/Elect position is new this year and Peter will move automatically to UNOLS Chair when Tim's term is over. Two new council members are Peter Ortnor of UM/RSMAS and Denis Wiesenburg of University of Southern Mississippi. (See [Appendix III](#)).

The National Oceanographic Aircraft Facility, Center for Interdisciplinary Remotely Piloted Aircraft Studies (CIRPASS) was voted in as an operating member of UNOLS. Future possibilities include joint ship/aircraft operations.

The current fleet consists of 27 vessels and 20 operating institutions. The UNOLS mission statement included “broader access to research vessels and other resources”. UNOLS is an advisory body only. The operators are responsible for the fleet, working toward continuous quality improvement and plan for facilities of the future, i.e., science vans, science mission requirements (SMRs) and group purchases.

Safety Committee

Tom Althouse, SIO, reported that the safety committee was the first committee formed in UNOLS. Tom stated that the Research Vessel Safety Standards (RVSS) was currently under review by the committee members. Each reviewed several chapters and the goal is to publish revised standards by the end of 2002. Several issues are still unresolved:

- Should the new van standards be included in RVSS.
- Is the RVSS a standard or recommendation? What is mandatory, optional or a guideline?
- The RVOC Safety Training Manual is to be in every stateroom on the ships. The Safety Video is based on Chapter 1.

Ship Scheduling Committee (SSC)

Joe Ustach, Duke, Chair and Dan Schwartz, UW, Vice-Chair reported on the ships scheduling process for 2003. Dan stated that the large ships were over subscribed with a 9% increase overall in the fleet from 2002-2003. There was difficulty with multi-ship operations and ROV availability. The R/V PELICAN and R/V CAPE HATTERAS are scheduled for yard periods, which hurts overall availability. The major funding burden is shared by NSF (59%), Navy (18%), and NOAA (12%). (See [Appendix IV](#))

Research Vessel Technical Enhancement Committee (RVTEC)

Stewart Lamerdin, MLML, reported on the 2002 activities that RVTEC is currently undertaking including new standards for CTD wire, participating in the SMR efforts for ocean and regional class vessel replacements and standard levels of service for marine technicians. Additionally, RVTEC was represented by Barrie Walden, WHOI, at the annual INMARTEC meeting held in Japan.

The 2002 Annual Meeting will be Nov. 12-14 in Hawaii with topics of discussion on defined levels of support, review of post-cruise assessment forms (PCAs), wireless networking solutions, vessel refits and standardization of instrumentation.

(See [Appendix V](#)).

Arctic Icebreaker Coordinating Committee (AICC)

Dan Schwartz and Mike Prince spoke briefly about AICC and deferred to Joe Bodenstedt of the USCG. Joe stated that POLAR SEA and POLAR STAR deployed to McMurdo, Antarctic for re-supply and science support. Additionally, HEALY and POLAR STAR spent time in the Arctic in 2002. The schedule for 2003 is light with one vessel scheduled for deployment to the Antarctic. Mid-life extension for both 25 year old vessels is being planned and the sea water sampling system on HEALY needs to be redesigned. Also, the USCG intends to better define the technical level of service to be on a similar level as UNOLS and may contract out for ADCP equipment.

Deep Submergence Science Committee (DESSC)

Annette DeSilva, UNOLS, reported on recent DESSC meetings and the various issues that were discussed. She reported that Jason II sea trials went well and that WHOI has been funded to look at

ALVIN replacement with more speed, better ergonomics, endurance, full ocean depth (11km). She also reports that the NOAA-Link Symposium (May 02) was extremely successful. (See [Appendix VI](#))

Fleet Improvement Committee (FIC)

Joe Coburn discussed FIC's role in providing information to NSF, ONR and NOAA regarding fleet improvements with cost being a major factor. The estimate for fleet renewal was \$560 million over the next 20 years. New designators for the four classes of vessels are Global (70+m), Ocean (55-70m), Regional (40-55m) and local (<40m). Joe also reported on the scientific mission requirement (SMR) meetings. (See [Appendix VII](#))

Ship Operations Cooperative Program (SOCP)

Steve Rabalais, LUMCON, reported on the Ship Operations Cooperative Program. He stated that all agencies supported the \$5K membership fee. Topics of discussion at their meeting included identification cards for all seaman, training, security issues with emphasis on port security, merchant marine issues with input from members. He stated that numerous topics of discussion related to UNOLS vessels. They also have training videos available to members. Their website is www.SOCP.org. (See [Appendix VIII](#))

Van Standards and Inventory Committee

Matt Hawkins, UDEL, reported that 8 vans were constructed last year (2001) and that 5 vans are in the works for 2002/2003 under a group purchase program with NSF funding them. He also said that the UNOLS Van Manual was completed and is available on the UNOLS website at archive.unols.org/rvoc/vanspec.html. The van inventory will allow operators/scientists to search for special vans by region, usage, etc.

Agency Reports

National Science Foundation (NSF)

Dolly Dieter presented the National Science Foundation report. She said that the NSF budget was in the House and Senate at double digits. The bad news was that for now, they are on continuing resolution. The fleet replacement status was for the ARRV to be funded after 2004 and that regional vessel replacement would be at \$25 million per vessel including the science outfitting. She also reminded everyone about the new proposal deadlines; Ship Ops - Nov. 1 and SSSE – Dec. 1. (See [Appendix IX](#))

Office of Oceanographer of the Navy (ONR)

John Freitag discussed Navy funding highlights. In 2003 the Navy will fund 950 days and ONR will fund 750 days, which is up 60% from last year. ONR also funded an east coast scan fish and a POS MV for the R/V KNORR, as well as model testing for the new UDEL vessel. They are participating in a Z drive study with NSF. He stated that the KILO-MOANA was delivered in September 2002. Also, a study was commissioned to consider several classes of Navy ships for oceanographic use. Several personnel changes took place at ONR recently. Sujata Millick left in Dec. 01, Dr. Jane "XAN" Alexander was appointed Executive Director of Science and Technology at ONR and Tim Pfeiffer retired. (See [Appendix X](#))

National Oceanographic & Atmospheric Administration (NOAA)

Beth White reported that NOAA has been tasked to do a fleet plan by November 2002 and that the keel has been laid for a new Fisheries vessel. She also said that this year has been difficult due to the loss of

three employees; the most recent being James D. Martin, Program Analyst, who was killed by the sniper in Maryland.

Naval Oceanographic Office (NAVOCEANO)

Paul Taylor reported that NAVO has a zero budget for 2003 shiptime and that their program, which started in 1977-2002, has ended. He stated that a total of 1,905 ship days and 18 UNOLS ships were used during that period. This was equivalent to 7.2 Navy ship years. Gordon Wilkes, who spearheaded the program for many years, passed away this past year. He will be missed. (See [Appendix XI](#))

United States Coast Guard (USCG)

Joe Bodenstedt, Cdr. USCG, reported the POLAR SEA and POLAR STAR deployed to McMurdo, Antarctic for re-supply and science support. The HEALY and POLAR STAR were deployed in the Arctic in 2002. Joe stated that 2003 had a light schedule with only one vessel deploying to the Antarctic. Future plans include mid-life extension for 25 year old vessels; redesigning the HEALY sea water sampling system to eliminate freezing; better defining technical level of service to be similar to UNOLS; and consideration of contracting out ADCP services.

U.S. State Department

Liz Tirpak, Department of the State and Science, discussed the State Department's role for science. She talked about the Bureau of Oceans & International Environment and Science Affairs. Liz said that in the future, a passport is a must even if a person has a merchant mariner document (MMD). (See [Appendix XII](#))

Special Reports

SACLANT Undersea Research Center

Ian Sage reported on SACCLANT's new vessel LEONARDO and also that the R/V ALLIANCE was scheduled for a drydock period during Nov/Dec. 2002 in Genoa, Italy. Ian replaced Chris Gobey, who retired this year. (See [Appendix XIII](#))

Natural Environment Research Council/Research Ship Unit , UK Ocean Research Services (NERC/RSU UKORS)

Geraint West, Head of UK Ocean Research Services, reported on the new NERC Marine Facilities funding model, which was changed in 2001 due to falling ship demand. Under the new model, overall cost to scientists is reduced and capital would come directly from NERC. Geraint also said that a 30 day cruise was postponed near Muscat, Oman due to 9/11 and that the DARWIN replacement would cost 35 million pounds (\$58,033,534.50 USD) (See [Appendix XIV](#))

Netherlands Institute of Sea Research (NIOZ)

Marieke Rietveld spoke about INMARTEC and it's goal to create and maintain a permanent International network of skilled technological and key operator support for sea going marine research. Areas of concern were ROVs, AUVs, Submersibles, training and safer operations. Marieke also discussed the Euro meeting where clearance problems with Russia and India were topics of concern for operators wanting to conduct science ops in their waters. (See [Appendix XV](#))

Research Vessel Updates

AGOR 26 KILO MOANA

Stan Winslow reported on R/V KILO MOANA, UH's new Swath vessel. He stated that the ship is now operational and was currently on the first cruise. The vessel met expectations but can still be improved with time.

R/V HATTERAS Mid-Life

Joe Ustach discussed the plan for the R/V CAPE HATTERAS refit scheduled for 2003. (See [Appendix XVI](#))

R/V PELICAN

Steve Rabalais reported on the mid-life refit for PELICAN with major changes being a 10 foot stern extension, crane relocation, and A-frame and engine room ventilation improvements. Cost is expected to be \$1.7 million. (See Appendix XX)

R/V ASTERIAS Replacement

Joe Coburn discussed the design for a 60-foot aluminum mono-hull capable of 20 knots speed.

R/V ALPHA HELIX Replacement

Tom Smith stated that the Alaska Region Research Vessel, which will replace the ALPHA HELIX is currently in the last phase of design and can be viewed on the UNOLS web page under ARRVPposter.pdf. (See Appendix XVII)

New National Marine Fisheries (NMF) Vessel

Jim Meehan reported that the keel has been laid for the first vessel. The ship is being constructed by Halter Marine with a mid-2004 delivery. The vessel is being constructed in 25 foot modules with 8 currently being worked on. Jim stated that money for a second vessel was approved by the Senate but not by the House yet. The first vessel is scheduled for service in Alaska.

R/V SUNCOASTER Replacement

Randy Maxson, USF, reported that the SUN COASTER replacement was not yet funded by the State of Florida. The vessel is expected to be 140 feet in length and capable of carrying twenty scientists.

R/V ROBERT C. SEAMAN Update

Phil Sacks reported that ROBERT C. SEAMAN has been in service for 15 months with a successful year in the Pacific. The scientific equipment is functioning great. R.D. Instruments used the SEAMAN as a test platform with good results.

R/V CAPE HENLOPEN

Matt Hawkins reported on the HENLOPEN replacement's current status. One note of interest was the fabrication of a full size mock-up of the laboratories and deck areas including vans. This proved to be an excellent way of averting potential problems with placement of equipment, A-frames, side frames and winches. The vessel will be built to Sub Chapter "U" requirements wherever possible, but will be inspected. Cost is expected to be \$10-12 million including science outfitting. (See [Appendix XXI](#))

CMMS Update

Bill Hahn of URI, Tom Althouse (SIO), Joe Coburn (WHOI), and Paul Ljunggren (Lamont Doherty) (not present), discussed the status of the Computerized Maintenance Management System. The four institutions selected to implement the Xantec system and will generate a report indicating effectiveness. Tom reported that Scripps has met with Xantec representatives to select modules. The biggest decision is what kind of database to use, by system or by component. Joe urged that users work with the Xantec user group offline. WHOI presently has SafeNET in place.

Post Cruise Assessments and PCA Results

Mike Prince reported on PCA forms received for calendar year 2002; both the Chief Scientists and the Captains reports. He stated that most were still being submitted on paper but that some were coming in electronically. He encouraged everyone to start submitting electronically and that the UNOLS Office will develop a form that can be filled out offline and then submitted with email from the ship. (See [Appendix XXVII](#))

Safety Statistics

Mike Prince reported the safety statistics for the UNOLS Fleet. (See [Appendix XXV](#)). The accident rates at sea and their port accident rate make up the report, which is submitted by operators on a quarterly basis. The Medical Advisory Systems (MAS) report (See [Appendix XXVI](#)) for the UNOLS fleet in 2001 was 81 total cases for 15 vessels and for 2002, through Oct, is 91 cases for 19 vessels.

Ship Inspection Program

Dolly Dieter, NSF, reported that scheduling of inspections has resumed, starting in November 2002 through June 2003. All vessels must be completed by June. She stated that the purpose of the Inspection Program was to ensure compliance with Research Vessel Safety Standards (RVSS), up-to-date science capability, and high quality maintenance; bearing in mind that UNOLS is not a regulatory agency. (See [Appendix XXII](#)). Findings from the Inspection Program are:

- Not taking advantage of training opportunities
- Need for improvement on emergency drill training
- Winches and wire need improvement, maintenance and training on operation

Shipboard Scientific Support Equipment Program

Dolly Dieter, NSF, stressed the importance of following the guidelines for the NSF SSSE Proposals and that proposals received after 1 Dec. 2002 would not be accepted.

Winch and wire Update

Mike Prince gave a status report on the new generation of CTD cable. Mike, Rich Findley (HBOI/RSMAS), Dale Chayes (LDEO) and Jon Alberts (WHOI) make up the wire committee looking into the problem. It's still not clear whether one wire will cover all areas such as CTD, undulating profilers, and other instruments that may require a larger bandwidth. Most importantly, the safe working load (SWL) needs to be uniform.

Salary Surveys

Marla Feldman (San Jose State University Foundation) and Matt Hawkins (UDEL) discussed the regional/local ship salary survey and Bill Hahn (URI) discussed the intermediate vessel salary survey. He stated that most operators hire at close to the median or above in the various crew salary ranges.

Stability Program Update

Justin Morgan, Glosten & Associates, discussed recent improvements in their stability program software.

Oceans International

Doug White, UDEL, maintains a searchable database of cruise schedules, ship specifications and contact information for research vessels at www.researchvessels.org. Presently, there are 424 ships and 150 countries. The United States alone has 102 entries. The ship schedulers are in calendar form.

Insurance and Liability

Dennis Nixon Esq., URI, reported on new developments this past year. Foremost being the increase in insurance rates post 9/11. Also, while none of the UNOLS fleet have been impacted by OSHA Regulations, it is worrisome that it might start happening. Shipboard cranes could fall under OSHA Regulations.

Another issue is acoustic research and marine mammals. Several incidents of whale beachings and deaths have raised major concerns. Also, the ISM Code deadline has passed (July 02) for the vessels over 300 GRT. One interesting note is that ISM compliant vessels have less claims than vessels without ISM. (See [Appendix XVIII](#))

Lastly on insurance issues, tonnage loss is the highest since 1994 which factors into the higher insurance rates.

Wednesday, Oct. 16, 2002
Moss Landing Marine Labs

Human Factors in Ship Design

Dr. Thomas Dobie, National Biodynamics Lab, College of Engineering, Univ. of New Orleans was scheduled to make a presentation on human factors in ship design, however, was unable to attend. He did provide a paper on the subject. (See Appendix XXVIII)

Fleet Renewal/SMRs

Mike Prince, UNOLS, discussed what the science mission requirements (SMRs) desired versus the reality. The workshops provided the opportunity for input from all sources to develop a new set of SMRs for ocean and regional class vessels. The Ocean Class is at the public comment stage now and the regional class will be ready for comment next week. The information is organized in three steps, which you can follow by starting at the FIC page or one of the two SMR development pages:

FIC Page:

<http://archive.unols.org/committees/fic/>

Ocean Class page:

http://archive.unols.org/committees/fic/ocean/ocean_class.html

Regional Class page:

http://archive.unols.org/committees/fic/regional/regional_class.html

For each SMR there is a summary page that gives an overview and table of key characteristics:

Ocean Class Summary:

http://archive.unols.org/committees/fic/smr/ocsmr_version1.html (updated March 2003)

Regional Class Summary:

http://archive.unols.org/committees/fic/smr/rcsmr_version1.html (updated March 2003)

Finally, there is a draft of the complete SMR that is set up so that you can read and comment online or you can download the document as a Word file to read and comment on. You are welcome to review both SMR documents, or just one as you see fit. The SMRs are longer and more detailed, so please take the time to read them thoroughly and comment on those sections where you see the need for improvement, clarification or if you disagree with the characteristics being recommended.

Security

Dan Schwartz, UW, Chair of RVOC Security Committee reported on recent and forthcoming security issues. Special problems for research vessels are slow speed, stationery operations and close to shore operations. There are volumes of information available via <http://archive.unols.org/rvoc/security.html>. Information about one professional service company specializing in maritime security, Applied Marine Technology, Inc. that has been used by WHOI was presented. (<http://www.amti.net/>)

International Safety Management Code (ISM)

Joe Coburn (WHOI), Tom Althouse (SIO) and Dan Schwartz (UW) shared their experiences implementing the ISM requirements. All agreed that the first step was to get a consultant in to review what they had and provide a plan for what they needed to do in order to meet the requirements and become certified. Additionally, all agreed that procedures for all phases of operations were the most time consuming part of the process.

Ship Inspection Program

Blake Powell, Jamestown Marine Services, reported that JMS has been inspecting UNOLS vessels since 1997. He stated that the goals of the inspections were to assure that the scientific capabilities of the vessels and technical support meet accepted standards and to assure the seaworthiness and safety of the vessels supported by NSF meet or exceed the standards set forth by UNOLS RVSS (Research Vessel Safety Standards) and that NSF-owned vessels are maintained adequately.

Blake discussed overall findings of the recent inspections and made the following recommendations:

- All crew read the RVSS and make sure copies are on board
- Maintain current waste management logs
- Adopt a preventive maintenance program and keep records
- Follow safety training program
- Keep up to date fire and safety plans
- Maintain adequate fire-fighting equipment
- Insure that all certifications are up to date
- Have current lists of equipment on the vessel

Isotopes on UNOLS Vessels

Woody Sutherland and Sandy O'Brien from SIO shared their experiences regarding the use of radioisotopes onboard the Scripps Research Vessels. In general, many scientists, graduate students, and others recruited to participate on cruises are uninformed about procedures relating to isotopes onboard ships and in their home labs. This same issue will be discussed by RVTEC, which will provide more

information and generate recommendations for future action. (See [Appendix XXIII](#))

Medical Standards for Scientists using UNOLS Vessels

Cdr. T.J. Edwards, NOAA, gave a presentation on why health records are necessary. He described the NOAA Health Services Questionnaire (HNSQ), which is to provide adequate health records for screening and medical care. (See [Appendix XXIV](#))

**Thursday, Oct. 27, 2002
Moss Landing Marine Labs**

Round Table Discussion (Marine Superintendents Only)

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

- Ship Inspection Program
- International Safety Management Code (ISM)
- Term limits for RVOC Officers
- RVOC/RVTEC Joint meetings
- Medical Standards for Scientists
- Quality of Service
- Proposal Sharing
- Emergency Air Supply

Business Meeting

Election of Chair and Vice-Chair

The current Chair, Steve Rabalais and the current Vice-Chair, Tim Askew were unanimously re-elected to another term (one year under new term limits of three years total in either position, which is a change in the by-laws). Additionally, the Vice-Chair is now Vice-Chair/Chair Elect and will serve a term of three years.

Assignments to Committees

Joe Coburn, WHOI, will remain on the Fleet Improvement Committee (FIC) until his retirement from WHOI. RVOC will appoint a new representative at that time. Dan Schwartz, UW, will be the Arctic Icebreaker Coordinating Committee (AICC) representative. Dan Schwartz, UW, will be the Chair of the Security Sub-Committee and Tom Althouse will be Vice-Chair.

Action Items Pending

Agenda Committee for 2003 is made up of the current Chair (Steve Rabalais, LUMCON), the host institution (Mike King, Univ. of Minnesota, Duluth), and other volunteers (Dan Schwartz, University of Washington).

Suggestions for 2003 – No agenda topics were submitted at the meeting. Topics will be solicited via email.

Action Items

- The Safety Committee would like to have a separate meeting at a different time (to be determined) than the Annual RVOC meeting. This would require funds for travel, etc.
- Determine if Paul Ljunggren would accept being the RVOC representative to SOCP.
- Make decision regarding inclusion of Van Standards in the RVSS.