

UNOLS SHIP SCHEDULING MEETING

National Science Foundation
4201 Wilson Boulevard, Room 1235
Arlington, VA 22230
9 September 1996

Appendices

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INTRODUCTION

This report is a summary of the discussions at the UNOLS Ship Scheduling Meeting held at the National Science Foundation in Arlington, Virginia on 9 September 1996. The Ship Scheduling Committee met to present schedules and deliberate on the funding implications for 1997. In addition to the schedulers from the UNOLS operator institutions, agency representatives and program managers from NSF, ONR, NAVO and NOAA attended. The meeting agenda was followed except as indicated herein. A copy of the agenda is included as [Appendix I](#). A list of the attendees is appended as [Appendix II](#).

Schedulers provided the UNOLS Office with the latest 1997 proposed schedules. These schedules were posted on OCEANIC. Schedulers also provided the UNOLS Office their best estimates of the costs to support these schedules. A summary of these costs is included as [Appendix III](#). In advance of the meeting the UNOLS Office distributed an inventory list of the 1997 and 1998 ship time requests (NSF Form 831) held by that office. Copies of these inventories are included as [Appendix IV](#) & [Appendix V](#) respectively. Copies of the provided 1997 ships' cruise tracks are included as [Appendix VI](#).

The meeting was called to order at 0830 hrs. by the Chair, Don Moller. Introductions were made around the room.

FEDERAL AGENCY REPORTS

National Science Foundation - Dolly Dieter provided a brief statement suggesting that the schedules published reflected many inefficiencies which would need a careful look during this meeting.

Office of Naval Research - Sujata Millick reported that she had obligated all of the ONR money available for 1997 and that additional ship days would not be likely.

Naval Research Laboratory - Norm Cherkis echoed Sujata's comments that the NRL money for 1997 has been totally obligated.

National Oceanographic and Atmospheric Administration - Scott McKellar reported that NOAA's OAR is planning to obligate approximately \$3M for 1997 UNOLS ship operations. In the out years this support is expected to be approximately \$2.6M.

Naval Oceanographic Office - Pat Dennis reported that Congress is likely to pass the National Oceanographic Partnership Act (NOPA). This should help UNOLS with \$7.5M "new" money for 1997.

Although this is only one year funding, all concerned would like to see it continuing. Pat then introduced CDR Jim Trees and Gordon Wilkes of NAVO. Jim provided a series of view-graphs, [Appendix VII](#), which outlined how NAVO planned to utilize the \$7.5M. He explained that military surveys had access to foreign country's EEZ and that the NAVO fleet is fully committed on this work. They have generated a backlog of survey and oceanographic requirements in both the U. S. EEZ and in international waters. Here is where UNOLS can assist. Jim stressed the need for close coordination for the projects planned on UNOLS ships in 1997.

The remainder of the meeting was devoted to the proposed schedules for 1997. Below are brief comments of each ship's proposed schedule. The order listed below represents the order presented.

ALPHA HELIX - University of Alaska - Tom Smith presented a 1997 schedule of 161 days for ALPHA HELIX with 53 of these days presently funded. Tom suggested that the funding decisions for the OPP work would not be expected at this time. All Russian clearance requests were turned down for 1996 work. Tom expressed concern that NOAA chose WECOMA for the 60 days of FOCI work in the Gulf of Alaska.

MOANA WAVE - University of Hawaii - Stan Winslow reported that MOANA WAVE has scheduled 48 HOTS days for 1997. A total of 180 days was presented. The schedule would permit doing the six days of Stevens if available. Stan indicated that one HOTS cruise in September of October should be done by another UNOLS vessel, probably REVELLE.

CLIFFORD BARNES - University of Washington - A schedule of 134 days of funded work was reported by Robert Hinton for BARNES. This is a good schedule for that ship.

WECOMA - Oregon State University - Fred Jones presented a schedule of 193 days for WECOMA in 1997. This includes the NOAA FOCI work in the Gulf of Alaska. The schedule could not accommodate the cruise of Nittrouer which will go to THOMPSON.

POINT SUR - Moss Landing Marine Laboratory - Mike Prince provided a schedule of 203 days with 153 of these days presently funded. NPS will be providing \$100K for ship use in 1997. The Bellingham work could not be accommodated.

ROBERT G. SPROUL - Scripps - The SPROUL schedule was presented by Rose Dufour. The schedule reflected 140 days which included work with BARNES on the Simenstad cruises. Weather days have been included in the schedule.

NEW HORIZON - Scripps - Rose also presented the schedule for NEW HORIZON. The 216 day schedule includes 63 days of NAVO work.

PELICAN - LUMCON - The PELICAN schedule was presented by Steve Rabalais and includes an optimistic 271 days. At this point 100 days have been funded. The NAVO work has been triple booked with GYRE and LONGHORN. A total of 76 days has been scheduled for servicing buoys for the National Data Buoy Center. This work is likely to be reduced significantly.

LONGHORN - University of Texas - The schedule for LONGHORN reflected 96 days of which 68 were funded. As indicated above the NAVO work has been triple booked. The funding for the Whitledge work continues to be pending.

GYRE - Texas A&M - Dave Powell represented the GYRE schedule. The scheduled work for Dunlap/Bryant needs to be resolved.

CALANUS - University of Miami - Dave also presented the schedule for CALANUS. A total of 102 days has been scheduled of which 66 are funded.

SEWARD JOHNSON - Harbor Branch Oceanographic Institution - Tim Askew provided the Johnson's schedule which includes 154 days of NSF time and 67 days of other totally 221. Tim was

advised that the transit time needed to be coordinated between NSF and NOAA.

EDWIN LINK - Harbor Branch Oceanographic Institution - Link's schedule included a major cruise to New Zealand which is still problematical. Tim reported that the Martin work could drop out.

SEA DIVER - Harbor Branch Oceanographic Institution - Tim presented a modest schedule for SEA DIVER which included double booked work of NAVO.

CAPE HATTERAS - Duke/UNC - Joe Ustach provided the schedule for CAPE HATTERAS. The ship will be operating out of both WHOI and Norfolk. The Buesseler work has been funded, however, the number of days need to be checked. The Collins work has been funded which includes transit that is to be split between NSF and ONR. The NAVO work is double booked with SEA DIVER.

CAPE HENLOPEN - University of Delaware - CAPE HENLOPEN's proposed schedule was provided by Tim Pfeiffer. A schedule of 170 days was presented which included NAVO work.

WEATHERBIRD II - Bermuda Biological Station - Lee Black provided the schedule of WEATHERBIRD II which included 134 days. Lee reported that the Hydro station program has been lost as well as the work of Dueser. The ship picked up an NRL cruise for Weideman.

ENDEAVOR - University of Rhode Island - Bill Hahn provided the schedule for ENDEAVOR. This schedule was closely linked with OCEANUS including GLOBEC, Coastal Mixing and Optics and PRIMER work. A total of 187 days were scheduled.

OCEANUS - Woods Hole Oceanographic Institution. - The OCEANUS schedule was presented by Don Moller. Don discussed the coordination with ENDEAVOR and explained that equipment needed to be shared. Some date changes are likely. A total of 202 days has been scheduled.

LAURENTIAN - University of Michigan - Linda Goad provide LAURENTIAN's schedule which included a modest 77 days. Linda was informed that the Jude cruise funding remains pending.

BLUE FIN - Skidaway - No schedule was provided for BLUE FIN

URRACA - Smithsonian Tropical Research Institute - No schedule was provided for URRACA.

LARGE SHIP SCHEDULES

Don Moller reviewed the large ship requirements for 1997 listing all of the cruises that were time constrained. These constraints caused significant difficulty in scheduling.

KNORR - Woods Hole Oceanographic Institution - KNORR will be operating in the North Atlantic for 1997 which includes a major WOCE cruise. The Talley cruise should include two days for Rossby. The Catapovic ship time funding remains pending.

ATLANTIS - Woods Hole Oceanographic Institution - ATLANTIS is expected to be delivered 24 February 1997. It will undergo outfitting and ready for operation on 2 June. A total of 206 operating days are scheduled which include 198 funded days. There are 88 ALVIN dives planned and 32 days with AMS 120. The schedule starts in the Atlantic and moves to the Pacific with work off San Diego then south to the northern and southern EPR. A Post Shakedown Availability (PSA) is required before the end of April 1998.

THOMPSON - University of Washington - Robert Hinton provided the schedule for THOMPSON. The ship will sail in early January 1997 for the western Pacific for the Fryer and Derbyshire work then returning to Seattle in May. The NOAA work originally scheduled will go to BROWN. A schedule of 290 days is expected.

REVELLE - Scripps - The schedule of REVELLE was presented by Rose Dufour. The recent addition of Urabe and Lutz cruises permits an efficient way to work to Valparaiso for the Lonsdale cruise. This positioned REVELLE for Mix then north for the NOAA Weller work. Timing for the Weller cruise will need coordination.

MELVILLE - Scripps - MELVILLE departed 8 September for work in the south eastern Pacific then proceeding around the world from west to east. The ship will pick up the moorings of Nowlin and then Luther. After returning to the U. S. MELVILLE will be available for the NAVO work in the Gulf of Alaska.

MAURICE EWING - Lamont Doherty Earth Observatory - EWING's schedule was provided by Mike Rawson. The ship is planning a maintenance period in the Gulf Coast completing the end of March 1997. EWING can then be available for the NAVO work. After Atlantic cruises the ship will transit the Panama Canal completing the year in the Pacific.

Questions came up during the meeting as to the scheduling process. Scheduling was particularly dynamic during the summer with many cruises changing ships several times. Scientists expressed to their program managers their dissatisfaction with the process. The year was particular active due to the late additions of some cruises and the late funding decisions of others. The Ship's Scheduling Committee adjourned while a smaller group deliberated the ramifications of these changes and to further wrestle with the scheduling process as it exists.

Ship Scheduling Review

**National Science Foundation, Room 730
4201 Wilson Boulevard
Arlington, VA
September 10, 1996**

The Ship Scheduling Review Group met at 0800 10 September to review the deliberations of the UNOLS Ship Scheduling Committee meeting of 9 September. Present were Don Moller, SSC Chair; Robert Hinton, SSC Vice Chair; Dolly Dieter, NSF; Steve Piotrowicz and Beth White, NOAA; Ken Johnson, UNOLS Chair; and Jack Bash, UNOLS.

Below are comments resulting from the meeting. They are presented in the order addressed during the 9 September Scheduling meeting. Most issues had been resolved prior to the meeting with the exception of the NAVOCEANO work and the schedules of MELVILLE, REVELLE and EWING. The NAVOCEANO work will be discussed in the ship write ups then summarized at the end.

ALPHA HELIX - The 161 day schedule appears fine as presented. It is understood that funding decisions from OPP will come later with changes likely. NOAA has cruises scheduled for WECOMA that could possibly be accommodated by ALPHA HELIX. A justification of ship selection by NOAA is anticipated.

MOANA WAVE - Additional days must be added to the schedule to accommodate the Phipps-Morgan deployment cruise. The Duennebier work is funded by NSF facilities not the instrumentation section of NSF.

CLIFFORD BARNES - A good schedule of 134 days was presented for BARNES.

WECOMA - A justification of the NOAA FOCI work aboard WECOMA is anticipated.

POINT SUR - POINT SUR has scheduled the February portion of the NAVO work. The Review Group

believes that science would be best served by having both portions of the cruise (Feb and Aug) on the same ship. This would only work if NEW HORIZON could take POINT SUR cruises freeing that ship to complete both portions of the work. This needs to be investigated and the cost implication evaluated. If greater costs are incurred by NSF this exchange will not be acceptable. If the swap is not feasible then two different platforms will be the only way to accomplish both portions of this project.

ROBERT SPROUL - A possibility of four weather days could be included on the Simenstad cruise not eight. Weather days should only be used if needed and not converted into science days.

NEW HORIZON - See comments above concerning the coordination of the NAVO work with POINT SUR.

PELICAN - An ambitious and optimistic 271 days has been scheduled. It is likely that the National Data Buoy Center Program work will be significantly reduced. The NAVO work is triple booked on PELICAN, GYRE and LONGHORN. The Review Group believes that both PELICAN and GYRE are capable of doing the work and the decision may come down to cost. It is recommended that NAVO perform a ship check and assess which of these two ships is preferred for their work taking into account the differences in day rate. It is understood that if PELICAN is selected LUMCON will work with U Texas to organize the technician support.

LONGHORN - The Whitledge cruise remains pending. The Review Group believes that both PELICAN and GYRE are better suited for the NAVO work - see comments above.

GYRE - Funding for the Dunlap/Bryant work needs to be resolved. See comments above with respect to the NAVO work. The Rowe-REU work remains pending.

COLUMBUS ISELIN - No schedule.

CALANUS - No comment.

SEWARD JOHNSON - The coordination between Molinari, Leaman and Richardson is necessary to resolve the South Atlantic work. More consolidation is necessary. Transit costs between NSF and NOAA will need to be shared.

EDWIN LINK - The June Molinari work should be 10 not 22 days.

SEA DIVER - The LaPointe work has been declined. For the integrity of the science it is the view of the Review Group that both legs of the NAVO work should remain on one ship. Because CAPE HATTERAS is able to schedule both legs and is a more capable ship to do the work the NAVO project should go to that ship.

BLUE FIN - No schedule presented.

CAPE HATTERAS - The Ledwell work should be listed as ONR not NSF. A sharing of the transit costs between NSF and ONR should be worked out. Check the timing of the Collins work to ensure it fits with Collins on EWING. The Gettrust work is still pending. Note the comments above (SEA DIVER) concerning the NAVO work.

CAPE HENLOPEN - Good schedule - no comment.

WEATHERBIRD II - A light schedule, no comment

ENDEAVOR - The multiple ship work with Morrison could create a timing problem for the cruise. ENDEAVOR and OCEANUS have well integrated schedules to accommodate the GLOBEC (NSF) CM&O (ONR) and PRIMER (ONR) work.

OCEANUS - A tight schedule with mostly GLOBEC work through August.

LAURENTIAN - The Jude cruises have been declined which leaves LAURENTIAN with a very light schedule. Coordination with NOAA's HALCYON for future operations should be considered.

URRACA - No schedule available.

Large Ships

The schedules of the large ships are driven by several programs which have serious constraints.

KNORR - The ship will remain in the Atlantic for the year. Investigate adding two days to the Talley transit to accommodate Rossby. Silva should be considered for 1998.

ATLANTIS - The Schedule presented may be significantly modified if the ship can do its' PSA early which frees up an open end for the southern EPR programs. DESSC should consider when is the best time to marry the ROV system to ATLANTIS. This will have an impact on future work. The ATLANTIS schedule is unable to accommodate the funded Karson and Wirsen/Taylor work in the Pacific.

THOMPSON - The NOAA O'Clock work will go aboard BROWN. The port time in the NAVO program was removed reducing the charged time from 18 to 14 days. A healthy 291 day schedule remains. (see note in REVELLE comments re HOTS)

REVELLE - A Urabe/Lutz cruise has been added to bridge the transit to the South Pacific for the Lonsdale cruise. REVELLE will do the Mix work then Weller. A resolution is necessary concerning the loading port for the Weller cruise. Is Callao acceptable? REVELLE will do the Tanner Banks SeaBeam survey for NAVO. Stephens has been moved to September. REVELLE or THOMPSON (depending on the month available) could be available for a HOTS cruise.

MELVILLE - After MacDonald/Haymon MELVILLE will proceed to Cape Town sailing west to east. The Nowlin moorings will be picked up first followed by Luther's moorings. The ship could complete Christie's work if funds are available (very tentative). After Chave in the mid-Pacific and an overhaul in San Diego MELVILLE is available for the NAVO gravity work in the Gulf of Alaska. Ninety days have been scheduled, however, this could be extended if needed. The ship completes the year with Langmuir at 90N.

EWING - After an extended maintenance period EWING will be available for the NAVO work New York to Jacksonville. EWING must resolve the deck space and power requirements of NAVO. The Kent/Barton funding needs to be resolved. EWING will be available in September for the NAVO Seemap C/Remus work. The September start time must be acceptable to NAVO.

The following is a summary of the 11 NAVOCEANO projects:

Priority #1- Atlantic - Continental Margin Slope Stability Study.

EWING - April-May - Must check deck space and power requirements.

Priority #2 - ODISTA 23 Survey.

THOMPSON - 31 July - 13 August

Priority #3 - Seemap C/REMUS survey of Onslow Bay.

EWING - 3-27 Sept - Must check date acceptability.

Priority #4 - Southern California Offshore Range Survey.

REVELLE - 26 May-2 Jun - SeaBeam Survey

NEW HORIZON - 6 Jun-20 Jun - Side scan
- - Sampling

Priority #5 - NE Pacific Gravity Surveys.

MELVILLE - 22 Jun-19 Sept - Gravity.
(Could expand this work.)

Priority #6 - Cape Lookout to Mayport.

CAPE HATTERAS - 17 Feb-23 Mar, 25 Aug-28 Sep.

Priority #7 - Galveston, TX to Corpus Christi - NAVO ship check requested.

Option #1 - PELICAN - 10-22 Feb, 1-13 Aug.
Option #2 - GYRE - 1-13 Feb, 1-13 Aug.

Priority #8 - San Diego to Port Hveneme.

NEW HORIZON- 25 Feb-14 Mar, 28 Aug-14 Sep.

Priority #9 - Virginia Beach to Long Beach, NY.

CAPE HENLOPEN - 12 Feb-4 Mar, 21 Aug-10 Sep.

Priority #10 - San Francisco to Monterey, CA.

POINT SUR - 11-21 Feb.
NEW HORIZON - 15-16 Aug.

Priority #11 - Straits of Juan de Fuca to Columbia River.

WECOMA - Feb.
THOMPSON - Aug.

Neither has been scheduled, however, the schedules of the respective ships can accommodate the science.