SHIP SCHEDULING REVIEW MEETING

25 JUNE 1996
NATIONAL SCIENCE FOUNDATION, ROOM 730

A Ship Scheduling Review meeting was held at the National Science Foundation, 4201 Wilson Blvd., Arlington, VA on 25 June 1996. The meeting was opened by the Chair of the Ship Scheduling Committee (SSC), Don Moller, at 0830 hrs. Present were the SSC Vice Chair, Robert Hinton; NSF Representative, Dolly Dieter; ONR Representative, Sujata Millick; NOAA Representatives, Steve Piotrowicz and Captain Martin Mulhern; NAVOCEANO Representatives, CDR Darrell Smith and CDR Jim Trees; Executive Secretary, Jack Bash. Also present were Elizabeth Rios, Scripps; Pat Dennis, OON/JOI; David Epp, Mike Purdy, Sandy Shor and Marsh Youngbluth, NSF; Jennifer Hathaway, DOC Office of Inspector General; and Mary D'Andrea, UNOLS (***Appendix I***).

UNOLS ship schedulers had provided via e-mail their proposed ship schedules for 1997 (also filed on OCEANIC) and the estimated costs to support these schedules (see ***Appendix II***). Also provided, where appropriate, were ship tracks (see ***Appendix III***). The UNOLS Office developed an inventory of the ship time requests (Form 831) included as ***Appendix IV***. This information was used as the basis of the review deliberations. The purpose of the deliberations was to ensure all funded science was assigned to the ship(s) that could provide the most effective and efficient platform. Recommendations for consolidation of schedules were suggested in an effort to develop the most cost effective schedules possible while maintaining appropriate platforms for the science. This review was the first cut at the 1997 scheduling process. All funding decisions have not been confirmed. In some cases, additional cruises could develop.

NOAA's request for ship time has increased significantly, to about the $3.1M level. Various NOAA cruises are tentatively scheduled on PELICAN, SEWARD JOHNSON, EDWIN LINK, KNORR, THOMPSON, WECOMA, and possibly EWING and REVELLE.

Several problem areas became evident early in the meeting which unfortunately raised questions that could not be answered. In the Atlantic, the full scope of the requirements for GLOBEC were not identified resulting in major uncertainty in the magnitude of the sea going program and therefore the number and capability of vessels to meet those requirements. OCEANUS, ENDEAVOR, and possibly EWING, KNORR and CAPE HATTERAS are affected. A meeting of GLOBEC PIs on 2 July should result in a clearer set of ship needs. Also unknown in the Atlantic is the possible NAVO work which could have a significant impact on the very weak schedules of CAPE HATTERAS, CAPE HENLOPEN, WEATHERBIRD II and EDWIN LINK. In the Pacific, the funding status of the Derbyshire project is still unknown. The programs of Luther and Nowlin are in need of cost effective solution. The NAVO work could also impact Pacific ships if it materializes.

Below is a summary of those recommendations that were made including an update of some funding status decisions. Answers to a few questions have come forth since the meeting and are noted here. It is clear that considerably more scheduling work is needed before schedules ill firm up. If the NAVO work does not materialize lay-up considerations must be addressed for one or more of the class IV ships in the Atlantic.

The ship comments discussed below are listed in the order addressed at the meeting.

BLUE FIN - Skidaway: The cruise of Morran has been declined. No proposal has been received for the Alexander cruise and therefore will not be funded for 1997. Paffenofer has been funded for cruises of 48 and 25 days. He will not need the 25 days but can do his work in 48. A seven day cruise for Walker should be scheduled.

CALANUS - University of Miami/RSMAS: The ONR work of Zeka should be changed from ten to 15 days otherwise the published schedule appears fine.

GYRE - Texas A & M University: NSF has not received a proposal for Dunlap and should not be scheduled. The Santschi work has been funded, however, could be moved to PELICAN to provide a more efficient use of ship time.

LONGHORN - University of Texas:. The schedule for LONGHORN appears good as published.

LAURENTIAN - University of Michigan: The cruises of Weber and Cuhel are funded as indicated on the schedule. The Jude work is still pending. Efforts should be made to coordinate sea going work with other Great Lake ships to provide more efficient schedules.

SEA DIVER - Harbor Branch Oceanographic Institution: The work of Littler has not been funded for 1997, LaPointe funding remains pending.

PELICAN - LUMCON: The NSF and ONR work on PELICAN remains as indicated on the latest schedule. The funding status of the Dagnall work is not known.

CAPE HENLOPEN - University of Delaware: The latest schedule for CAPE HENLOPEN reflects the best information available on funded programs for that ship. A weak 103 to 113 day schedule remains.

CAPE HATTERAS - Duke/UNC: The cruises of Christensen and Moffett have been declined. Pafenhoffer has been funded and can get by with slightly less than the 25 days listed on the schedule. Funding for Buesseler is still pending. If funded, the winter cruises should be considered for a larger ship. If the Buesseler work is not funded the HATTERAS schedule will be very weak at just over 100 days. Weidemann, proposed for SEWARD JOHNSON, will need to be rescheduled for CAPE HATTERAS, EDWIN LINK or WEATHERBIRD II.

WEATHERBIRD II - Bermuda Biological Station: The five hydrographic station cruises on WEATHERBIRD's schedule were not proposed and not funded. Conte has been funded for six days. See note above concerning Weidemannn. A light schedule of about 110 days appears likely for WEATHERBIRD II.

EDWIN LINK - Harbor Branch Oceanographic Institution: The NSF and ONR portion of LINK's schedule appears firm. The NOAA Molanari ("Abaco Line") work will probably be about 10 days. This ship could be considered for GLOBEC and/or CM&O work in the spring. The NRL cruise for Wiedemann is to be added in May. LINK also has a light schedule.

OCEANUS - Woods Hole Oceanographic Institution: The NOAA Molanari work in the Central and South Atlantic will be scheduled aboard SEWARD JOHNSON. The GLOBEC work has been funded. The 21 days of Bock work will likely be reduced. Please see note below on GLOBEC and CM&O programs.

ENDEAVOR - University of Rhode Island: The Harbison work has been declined. The Molinari work will go aboard EDWIN LINK. Houghton should be listed as NSF and Irish should be listed as Bradley. A Pickart PRIMER mooring recovery cruise needs to be added. Please see note below on GLOBEC and CM&O programs.

SEWARD JOHNSON - Harbor Branch Oceanographic Institution: The Molanari and Richardson cruises need to coordinate a common off load/on load port other than Rio de Janeiro. Transit time can be saved if Molanari ends his cruise in Cape Town. A foreign ship could be considered for the Richardson work to save transit time. The remainder of the schedule appears fine.

KNORR - Woods Hole Oceanographic Institution: The Persson (NOAA) cruise appears questionable. Pickart's ONR work is funded. The Zaneveld and possibly Barth work should be considered for KNORR if the funding considerations can be worked out. A Dutch cruise off Greenland remains an option. An additional ten days could be added to the Bellingham cruise to accommodate increased needs of co-PIs (Catapovic is funded). There is still no word on funding for the Silva coring cruise.

NOTES ON GLOBEC AND COASTAL MIXING AND OPTICS: The two programs of GLOBEC and CM&O require extensive ship time in the months of April and May 1997. Both will be operating off the New England coast. The requirements exceed the time available on ENDEAVOR, OCEANUS and the NOAA vessels assigned. SEWARD JOHNSON will be in the Central and South Atlantic and not available. CAPE HATTERAS and CAPE HENLOPEN do not provide the bunk space nor weather reliability for this time of year. In addition, the full details of the GLOBEC requirements have not been finalized. This is expected to be completed on 2 July in WHOI. It would appear that KNORR and possibly EWING should be considered for a portion of this work. The full extent of their involvement will be better understood after the 2 July meeting.

NOTES ON THE CLASS IV ATLANTIC SHIPS: As noted above CAPE HATTERAS, CAPE HENLOPEN , WEATHERBIRD II and EDWIN LINK all have very weak schedules. Congress is presently considering a bill that could appropriate up to $7.5M for Navy survey work on UNOLS ships. If this or a portion of this money survives in the budget NAVO will have a significant amount of work for the UNOLS Fleet. NAVO has indicated that this work would go in areas off San Diego and off the U.S. East Coast. If the NAVO work materializes one or more of the above ships could get a strengthened schedule. If this is not the case a consolidation of programs may be necessary to keep from operating four half year ships resulting in the lay-up of one or more ships.

ATLANTIS - Woods Hole Oceanographic Institution: The schedule for ATLANTIS remains fluid depending on the actual delivery date of the ship and completion of ALVIN overhaul and certification. Funding for Bonatti has been declined. The ship should be ready for operations by May and will require a post shakedown availability in December. Operations in the Atlantic then the Pacific are anticipated.

EWING - Lamont-Doherty Earth Observatory: EWING has a difficult schedule for 1997. Only three cruise are funded that require this ship. These cruises have serious time constraints and are in different oceans. To best accommodate the three programs (and possibly a fourth, Collins) and meet the time constraints the following is recommended: A shipyard availability is scheduled in the first part of the year. The ship may be able to pick up one or more of the GLOBEC/CM&O programs as discussed above. About mid or even late in the year the ship should sail for the Central Atlantic for possibly the Collins work then the Eastern Atlantic for Sawyer. The ship would then transit the Panama Canal and complete Kent/Hardin/Barton (add 16 days for Barton) followed by Toomey (in FY '98). The cruises of McNutt and Mooer should probably go aboard a west coast Class I ship.

WECOMA - Oregon State University: The cruise of Stanton has been declined and the status of Sherr and Siebenaller remains pending. The FOCI work of NOAA in the Bering Sea was suggested for ALPHA HELIX, however, subsequent information from NOAA would keep this work on WECOMA. Nittrouer cruise should be booked on WECOMA with five additional days in Jan/Feb. A conflict could arise between the FOCI and Nittrouer work. The addition of 20 more days for Huyer needs to be checked.

NEW HORIZON - Scripps: The cruise of Webb has been declined. The cruises of Goericke and Mitchell have been funded, however, one of the Mitchell cruises should be removed. Added to the schedule should be 60 days for Montoya and 14 for Collins.

ROBERT GORDON SPROUL - Scripps: The schedule of Simenstad needs to be revisited to check the number of days per cruise and to include transit time. The Felbeck work has been declined.

MOANA WAVE - University of Hawaii: The schedule for MOANA WAVE remains a major question. Several cruises will likely change. Jenkins has been declined. The Schedule Review Group believes that the Nowlin work is beyond the capability of MOANA WAVE considering the size and number of moorings which would require multiple legs and excessive transit. The Luther work is considered marginal yet possible. Please see general notes below. The NOAA work should read Weller not Molinari. Although this was recommended to go aboard MOANA WAVE by the Group, subsequent information from Weller explains convincingly that this is not possible, requiring the services of a Class I ship. MOANA WAVE should schedule or work with other UNOLS vessels to ensure that ten HOTS cruises are completed during the year. Please see notes below.

BARNES - University of Washington: The cruises of Jumars, Devol, Emerson and Sternberg have been declined reducing the schedule by 37 days.

ALPHA HELIX - University of Alaska: The Royer work has been declined. There is no information yet on the scheduled OPP work. ALPHA HELIX was considered for both cruises of the NOAA FOCI work, however, subsequent information from NOAA suggests that WECOMA would be the preferred platform.

POINT SUR - Moss Landing Marine Laboratories: The work of Murray has been funded. The Fuhrman work remains pending. The work of Montoya and Collins should be moved to NEW HORIZON. ONR will check on the Catapovic cruise.

THOMPSON - University of Washington: Please see summary notes below.

MELVILLE - Scripps: Please see summary notes below.

REVELLE - Scripps: Please see summary notes below.

NOTES ON CLASS I/II SHIPS IN THE PACIFIC: Many questions remain unanswered for the Class I/II ships in the Pacific. The possible NAVO work could have an impact. The funding for Derbershire remains unknown and will affect the Western Pacific schedule for THOMPSON. Also, the possibility of using a foreign ship to do the Nowlin work remains unknown. Below is an attempt to distribute the major cruises in the most cost effective way. The listing is not inclusive.

THOMPSON: Derbyshire, Ballard, Fryer (I), State, Hammond (NOAA VENTS) Beeker/Johns/Chad, JGOFS

MELVILLE: MacDonald, Haymon, Hey ('96), Lonsdale, Mix, Chave

REVELLE: Pinkel, Zafiriou, Goerick, Stephens (three legs), Morgan, Langmuir (Bender)

MOANA WAVE: Lukas (ten total), Luther, McCorkle, Fryer (II)

EWING: Collins (possibly), Sawyer, Kent/Hardin/Barton, Toomey

Remaining unassigned in this mix is the work of Nowlin, Weller, Lutz, McNutt and Moore all of which needs to be booked. At present Nowlin is being considered for a foreign ship. If this does not materialize it would seem that Luther should go aboard the UNOLS ship that does, Nowlin probably MELVILLE. The Weller, McNutt and Moore work should be fitted into the schedule offering the least transit yet meeting the science requirements.

As discussed above the schedules are very much in flux. No lay-ups have been recommended at this time however this could change and be a reality. Several ships have very short schedules and consolidations could bring efficiencies.