UNOLS SHIP SCHEDULING REVIEW MEETING

National Science Foundation 4201 Wilson Boulevard, Board Room 730 Arlington, VA 22230 17 June 1997

Appendices:

I. Meeting Announcement
II. Ship Scheduling Review Meeting Attendance List
III. Ship Cost Summary 1997 & 1998
IV. 1998 Proposed Cruise Tracks

Introduction:

The Ship Schedule Review Group met on 17 June in Room 730 of the National Science Foundation as per the Chair's announcement, <u>Appendix I</u>. Those present were Don Moller, Chair; Robert Hinton, Vice Chair; Dolly Dieter, NSF; Sujata Millick, ONR; Scott McKellar, NOAA; Elizabeth White, NOAA; Gordon Wilkes, NAVO; and Jack Bash, UNOLS. Others attending are included on the attendance list, <u>Appendix II</u>.

The meeting was called to order at 0830 by Don Moller. Don welcomed the attendees and outlined the plan for addressing scheduling issues. A brief discussion was held on two outstanding problems remaining in the 1997 scheduling year. These were the THOMPSON gear failure with its impact on scheduling and the overlapping schedules of ATLANTIS/ALVIN and EWING causing an operational proximity problem. These would be further addressed at a later time.

Each ship's proposed schedule was reviewed. The cost summaries for 1998 as originally submitted are included in <u>Appendix III</u> along with the 1997 costs. <u>Appendix IV</u> includes the ship tracks submitted by the schedulers reflecting the schedules presented. Comments and recommendations of this review follows in the order addressed.

BARNES - University of Washington - The Strom and Banse cruises have been declined. The Deming work remains pending. The cruise of Simenstad to Astoria in February will need revaluation. If WECOMA can do this work it should be moved to that ship. This will remove the necessity for two ships and significantly reduce transit and weather days. An ONR funded cruise of 15 days for Curtis Davis should be added to the BARNES schedule.

BLUE FIN - Skidaway - The funding for Nelson has been declined otherwise the schedule looks fine as presented.

CALANUS - University of Miami - Funding for the Milne cruise has been declined. CALANUS schedule looks very full if all the NOAA work materializes.

LAURENTIAN - University of Michigan - The Jude work has been declined. The Green and Eadie CoOp work has been funded.

SEA DIVER - HBOI- All NSF proposed cruises for SEA DIVER have been declined. The ONR Ackleson work has been funded. The Ship Scheduling Review Group is concerned with the potential day rate increase.

URRACA - STRI - Both NSF cruises, Glynn and Kidwell, have been funded.

ALPHA HELIX - University of Alaska - The NSF cruise of Button has been declined; Kvitek has been

funded by NSF. The funding for the Weingartner/GLOBEC work is 100% NOAA funding. The OPP work remains pending since the panel has yet to meet.

POINT SUR - Moss Landing Marine Laboratory - The scheduled portion of POINT SUR's schedule looks fine with the exception of Welshmeyer and Worcester. These cruises should be moved to a larger ship (MOANA WAVE or NEW HORIZON) to decrease the likelihood of weather related delays. A review should be made of those cruises coordinated with Scripps to determine if a better balance of schedules is possible.

SPROUL - Scripps - The cruises of Felbeck and Dorman have been declined. If WECOMA can do the Simenstad work it should be moved to that ship. This will remove the necessity for two ships and significantly reduce transit and weather days. The Bernhard work (OCE 9711812) has been funded for two three day cruises. An ONR funded cruise of six days for Hodgkiss of MPL should be added. This will need to be coordinated with the schedule of FLIP.

LONGHORN - University of Texas - The cruises of Villareal, Gardner, Ingall, Holt and Benner have been declined. NOAA is funding the Walsh work and is scheduled on SUNCOASTER not LONGHORN.

PELICAN - LUMCON - The NSF cruises of Nelson, Mallison, Houde, Shiller, Paul and Schofield have been declined. Cruises by Goni (ONR) four days and Ornter (NOAA) 30 days should be added, however funding remains pending. The NAVO work double booked with GYRE should remain on PELICAN for cost effectiveness.

GYRE - TAMU - The NSF cruise of Goff has been declined. The NAVO work should be done aboard PELICAN to take advantage of the lower day rate on this ship.

EDWIN LINK - HBOI - Cook's REU work has been funded. The NSF Frank work has been declined. The funding for the Bernhard work remains pending.

CAPE HATTERAS - Duke/UNC - The work of Moore, Collins and Mountain has been funded, Nelson and Paul have been declined. The Anderson work has been funded with a 50/50 split NSF/NOAA (this could change if EPA enters into the program). The Keigwin work needs to go earlier than his work planned for ENDEAVOR/OCEANUS. This schedule has 264 days as written. An evaluation of the schedule is necessary to reduce the transit days and possibly transfer 30-40 days to OCEANUS/ENDEAVOR for better overall efficiency and relieve pressure on the technical personnel.

CAPE HENLOPEN - University of Delaware - The cruises of Bardege, Pelskaln, Coats and Kirchman have been declined, Sharpe remains funded (last year of a three year program). A ten day Badiey ONR cruise should be added. In addition, NOAA will likely add five to 15 days of ship time for R. Cowan of SUNY subject to funding availability.

WEATHERBIRD - BBSR - The BATS ship support level of funding is still under discussion by NSF. It is unclear whether or not the Dickey work has been included in the BATS program.

WECOMA - Oregon State University - Smith has been funded by NOAA, however, some revision of this work is expected. The Cowles work is jointly funded by NSF and ONR. The cruises of Huyer and Nittrouer are funded while the cruises of Moun and Klinkhammer remain pending. The NOAA (ECOHAB) work of Banse has been declined. An ODP program of ten days by Zumberge should be investigated as possible WECOMA work which should keep transit to a minimum. The Simenstad work on SPROUL and BARNES may be appropriate for WECOMA to decrease the transit and weather time presently scheduled. The NAVO work of two 12 day cruises should be coordinated with THOMPSON.

NEW HORIZON - Scripps - The work of Bernhard and Webb/Evan remains pending. Both NEW HORIZON and MOANA WAVE should look at the Welschmeyer and Worcester work currently scheduled on POINT SUR to determine the most efficient way to handle these cruises.

MOANA WAVE - University of Hawaii - The Berelson work (listed as Hammond) has been declined.

Capone has been funded and is double booked on REVELLE. Recent communication with the Program Manager indicates the scope of the work has increased requiring a larger ship and therefore scheduled for REVELLE. The Measures and Dushaw cruises remain pending. The NAVO work is double booked with EWING. Because of the heavy TOSS equipment and the need for this work to go in early 1998, it should be booked on EWING. Note: the comment above concerning the Weschmeyer and Worcester work currently scheduled on POINT SUR.

ENDEAVOR - University of Rhode Island and OCEANUS - WHOI - Both ENDEAVOR and OCEANUS have duplicate schedules. One of these ships should lay-up in 1998 unless additional work materializes which is unlikely. The determination of which ship lays up must be deliberated later. The cruises of Holbrook and Zafiriou have been declined. Four additional days for Brown have been funded. Both Shen and Wolfe on the "to be scheduled" list have been declined. The ONR work of Greene (Cornell) listed on the POINT SUR schedule has been moved to the East Coast and should go aboard OCEANUS/ENDEAVOR. The Anderson work in the Gulf of Maine is jointly funded by NOAA/NSF. Note the comment in the remarks of CAPE HATTERAS. If efficiency can be shown, one or more cruises should be transferred from CAPE HATTERAS to OCEANUS/ENDEAVOR.

SEWARD JOHNSON - .HBOI - The Barringer work of NOAA will be done on BROWN. The work of Johns has been declined. The cruise of Pawlick has been funded. Both Schmitt and Richardson remain pending. A seven day Yamomota (ONR) cruise should be investigated and possibly added to SEWARD JOHNSON. Weigt should consider use of local small vessels or coordinate this cruise with the Martin/Jahnke cruise scheduled aboard KNORR. HBOI should consider moving work from LINK to give SEWARD JOHNSON the best possible day rate.

BROWN - NOAA - BROWN will only do NOAA work in 1998. The ship will transit from doing vents work at Juan de Fuca in late 1997 to the east coast for the ACCE 24N section in the Atlantic. This will be followed by the PSA. After completing a maintenance period the ship will do OACES work in the Azores. BROWN will then again return to the Pacific and more PACS work. Upon completion of PACS the ship will do TAO work at 110oW and 95oW then the Weller recovery cruise. The Weller servicing work in early 1998 must be scheduled aboard a UNOLS vessel, probably MELVILLE.

KNORR - WHOI - The two NOAA cruises (Baringer and Wanninhof) will go to BROWN. The Johns cruise has been declined. The Silva work should be scheduled later to reduce transit time. NAVO's AUTEC Range survey of ten days should be added to KNORR's schedule. A 25 day ONR cruise of Jacobs (LDEO) should also be added. Note comment above concerning Weigt. If a local vessel is not used this work should be coordinated with the Marten/Jahnke cruise on KNORR.

The four remaining large ships are all working in the Pacific and must be considered as a group. The total large ship funded programs suggest only three ships should operate with one ship laying up.

Declines on the large Pacific ships include the following: EWING - McMarty, G. Moore (ODP), Dunbar, Hammon, Barth and Johns. Blackman is a pending ALVIN cruise in the Atlantic. MELVILLE - Levin, Christie, McMurtry, Webb and Goldfinger. Chave remains pending. REVELLE - Lonsdale, Yayanos, Mattei, Hammond, Hildebrand and Reimers; Chave and Gordon remain pending. See comment above about Blackman. THOMPSON - McDuff, Rittschof and Reimers; Chaves remains pending.

Many cruises have been double booked. NAVO has indicated that their gravity work in the Gulf of Alaska is their top priority which includes two 90 day legs. These can be done on two separate ships and, if convenient, broken into two segments.

Because of the above, efficiency dictates a re-alignment of cruises with one ship laying up. The following is a possible scenario to make the most efficient use of the fleet.

EWING

T. Moore, G. Moore (MGG), Karsten, NAVO TOSS, Gee and Bangs. Bond could be moved to KNORR if this reduces transit and is more cost effective.

REVELLE

JGOFS, Capone (1), NAVO (gravity), Capone (2) and Smith. If approved, Gordon. (If possible the two Capone cruises should be done with one trip south to conserve transit time.)

THOMPSON

Stephen, State, Fisher, Worcester, Stephen, Sternberg, State, Chave, NAVO (gravity) and NAVO (PhyO coordinated with WECOMA). MELVILLE Weller (servicing of moorings) then lay up.

MELVILLE

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ATLANTIS

No firm recommendations were made to the ATLANTIS schedule. The 1997 decision on the gear switch with THOMPSON could impact the 1998 schedule. Should ATLANTIS consider not going to Juan de Fuca in 1998 to allow more southern EPR time? The coordination of the ROVs will be important as the schedules are worked up for the large ships.