Report of the proceedings of the

UNOLS Ship Scheduling Committee and Scheduling Review Meetings

July 19, 2001

Room 1235, National Science Foundation

Arlington, Virginia

The UNOLS scheduling meeting was called to order at 0835 by Chair, Dr. Joe Ustach from Duke University. All attendees introduced themselves. A list of those attending is included as (*Appendix I*).

The meeting followed the published agenda (<u>Appendix II</u>)

LOCAL Ships:

URRACA: Schedule ok.

EDWIN LINK: In lay-up for the entire year.

WALTON SMITH: T. Frank is declined. Weingart request for Florida is no longer needed. Phinney D. to be removed. Fell is a decline. Reed Biocomplexity proposal (0120645) is still pending. Heil will stay on WALTON SMITH and come off of PELICAN schedule. Check on funding for Walsh and if funded to be scheduled on WALTON SMITH. Ortner is funded, Wilson is funded.

LONGHORN: Gardner/NOAA is still pending, need to check funding. No NSF work, 75 days all pending.

SAVANNAH: Froelich/GIT (OCE0120692) should be listed as PI is place of Montoya and is pending in Biocomplexity. Paffenhofer is scheduled on both HATTERAS and SAVANNAH, needs 24 days on HATTERAS and 15 on SAVANNAH and the grant (OCE9911513) is still current. EPA work is pending and NASA work is funded. 143 days of which 99 are funded.

BLUE HERON: 18 days all funded. Russ Cuhel may need to be scheduled on BLUE HERON or other vessel due to the discontinued operation of LAURENTIAN.

LAURENTIAN: Will be leased to NOAA on a long term basis starting at the end of July 2001.

SPROUL: Roesler ECHOHAB project is not funded. Bishop/NOPP program is funded, need an OCE number. Tom Herbers/NSF (0114875) is funded and needs to go back on the SPROUL schedule. 0083976 is the proposal number for Peineda. NAVY work is still pending and under strong consideration.

BARNES: OPP Project is still pending as part of SBI. Strong 134 day schedule with 115 days funded.

Regional Ships

ALPHA HELIX: Aagard (ONR) and Clough (NSF) are still pending. Konar is declined so the conflict in time with Estes is no longer a problem but the Estes cruise may still be scheduled on another vessel, need to contact program manager in OPP. GLOBEC is being shown as NSF but will be split with NOAA.

POINT SUR: Tom Boyd/NRL has been added but is still pending along with other NAVY projects. Need to be sure scheduled time does not conflict with Boyd's other cruises. NAVO west coast physical oceanography cruise legs are scheduled with one on POINT SUR with NPS and the other two are scheduled for either side of the Columbia River on WECOMA. Furhman is not funded for a third year. Seasonal dredge site cruises are not currently being planned. Garfield needs to be coordinated with Dever on NEW HORIZON

PELICAN: Plan to go in Shipyard on October 1st which will require several projects to be scheduled on other vessels. Nancy Rabalais work can go on ACADIAN after 1 Oct. Dagg will probably postpone until 2003. Heil and Walsh will go on WALTON SMITH. Hannifen will go on TOMMY MUNRO. Young is funded for three cruises of three days each and the November cruise will probably go on WALTON SMITH. Young is also funded for two ten day cruises on SEWARD JOHNSON that need to be coordinated with regards to timing with PELICAN/WALTON SMITH cruises. Four 10 day NAVO cruises are still pending and not double booked with anyone else.

WEATHERBIRD: Need to check on funding of Tom Church renewal of OCE9812419. WEATHERBIRD is available for work near Bermuda. 132 days shown as funded, depending on Church's status.

CAPE HATTERAS: Sieracki should go as an ancillary project on a larger ship such as ATLANTIS or OCEANUS class. NAVO Physical Oceanography cruises are booked on several ships. This east coast NAVO work needs to be all in one season, and covers a large area. These cruises can be on one ship or several ships. HATTERAS has all three but would need to be rescheduled to fit in one season. NAVO may add one more 8 day cruise in Onslow Bay during February/March. The Kings Bay work will be shifted to SEWARD JOHNSON and is also seasonally dependent. HATTERAS may be scheduled for refit period with their schedule distributed to other ships.

CAPE HENLOPEN: Need to make sure Boyd and Luther cruises do not conflict with other cruises. Sharp EAR0120547 status needs to be checked, need to find or create a shiptime request for this project. Wommack will have to go in 2003 due to timing of the panel. This results in about a 155 day schedule.

Intermediate Ships:

A preliminary meeting of East Coast Intermediate/Regional schedulers was held last night in an attempt to come up with a plan to deal with the weak demand. There are about 600 days of work for the four ships involved. No one is volunteering to be laid up. Three potential options were presented:

- 1. Lay up one intermediate ship and other two intermediates would have strong schedules. This may not accommodate all work in the proper time frame.
- 2. One intermediate ship lay-up partially and be in a standby mode to cover cruises as needed.
- 3. Divide schedules between four ships making four lousy schedules.

Linda asked if they considered partial lay-ups for two intermediate ships. The problem with this is that the amount of work at the beginning of the year is light leading to the possibility of having both ships laid up at the beginning and the end of the year.

Discussed the idea of rotating lay-ups, where it is known ahead of time which ship will be laid up next. This concept has been discussed and to some extent used in the past. It could make it possible to plan for overhauls and refit work that could take place when a ship was laid up. It would not be necessary to specify which year a ship would be laid up, but rather designate which ship would be next in line when their was a weak year. This ship operator would then put in place the plans for overhaul or refit work that could be acted on when needed.

Linda asked that the east coast intermediate review be tabled and discussed in a small group session after lunch.

A few specific items were mentioned that would have an impact on the East Coast Intermediate/Regional ship discussion.

Houghten cruises need to be one month apart, currently scheduled on ENDEAVOR.

- Menke cruise not scheduled because it is declined.
- Boyle: need to check whether or not it can go on the BROWN. McCartney is scheduled on KNORR..
- Debbie Smith mooring recovery cruise is scheduled on KNORR but will be moved to an Intermediate and needs to be in Mar/Apr 2002 due to battery life on the moorings.
- LWAD 02-2 Savage is on KNORR but will go on an Intermediate, has been on OCEANUS before.

Other Intermediates

GYRE: Ruppel is funded but scheduled for SEWARD JOHSON and should be removed from GYRE schedule because of a need for dynamic positioning and because the operational area is in the eastern portion of the gulf. To reduce transit, the cruises will be staged out of Ft. Pierce instead of Galveston. Timing of second cruise needs to consider Lizzaralde's schedule on the EWING because of potential conflicts for the Co-PI and needs to be at least 45 days after the SEWARD JOHNSON II cruise for Ruppel.

NEW HORIZON: Pecher cruise will stay on EWING and will be removed from NEW HORIZON. NAVO SCORE work needs to be scheduled during three different seasons. Need to consider the possibility of using the POINT SUR for some SCORE cruises. NAVO physical oceanography is covered by POINT SUR and WECOMA. Shallow water Bathymetry has been removed as a request and should be taken off the schedule. Fall CALCOFI cannot be scheduled properly with current schedule because of conflicts with Childress and Lizzaralde. The JORDAN is not available so we need to investigate scheduling Childress on the THOMPSON or another vessel to make room for the fall CALCOFI on NEW HORIZON.

WECOMA: Hickey ECHOHAB has been declined. NAVO JDF sidescan work will not go unless equipment schedule can be changed. Tim Cowles is a two ship operation with the Tynan GLOBEC cruise on THOMPSON or ATLANTIS. Voight will go on THOMPSON as part of the JOHNSON cruise and should come off of the WECOMA schedule. All of the HOME work needs to be coordinated with FLIP and REVELLE cruises in Hawaii.

LARGE SHIPS

Factors affecting large ship schedules in the Pacific:

- Timing between Goldfinger cruise currently on REVELLE and the FISHER cruise on MELVILLE needs to take into account about three weeks for shipping time for the OSU coring equipment.
- Scott on MELVILLE schedule is declined.
- THOMPSON, REVELLE and KNORR will need to accommodate 5 days for INSURV inspections.
- Stabeno cruise must be done during Spring bloom (Apr/May) and a second cruise needs to be scheduled before the ice season in the Bering Sea.
- NOAA wants to add an ITCT cruise for Tim Bates in the Mar/Apr time frame as a follow on to ACE-ASIA.
- Measures science requirements will be hard to meet without delaying other funded projects and adding a lot of extra transit days due to the location of appropriate ships just prior to his required time frame. Timing needs can be met, but the direction of the cruise will probably have to remain from Japan to Hawaii in order to schedule this work without disrupting the schedule for other projects. An attempt to add some days to compensate for sampling changes will be investigated.

• Timing of Tivey's cruise is locked into a narrow window because of the impact on subsequent cruises. This may conflict with other plans for Tivey. Need to determine if the cruise can still be scheduled as it is, since the alternative may be to move it to 2003 in conjunction with work for Fryer.

• Taylor's OBS work needs to be scheduled no earlier than mid Feb and preferably early March, Scheduling the MCS cruise first, followed by the OBS cruise will most likely solve this problem.

Break into working groups.

East Coast Intermediates: Plan to combine the current schedules for Hatteras, Endeavor, Oceanus and SEWARD JOHNSON into better schedules with the CAPE HATTERAS laid up. CAPE HATTERAS to look at mid-life overhaul during a lay-up period.

Large Ships in the Pacific: Decided that MELVILLE and EWING schedules would work with slight modifications to ensure proper and adequate timing of Measures, Stabeno, and Fisher. Need to make sure that Repeta is covered (will leave on MELVILLE schedule for now). Plan is to do Measures work from Japan to Honolulu or try to schedule on a Japanese ship, NSF will investigate this possibility.

LARGE SHIP SCHEDULES:

MELVILLE: Use MELVILLE I schedule, starting with two ship operation with REVELLE for Coale (SOFEX). Scott will be removed which will allow moving other cruises about 3 days earlier. Tivey will have to stay in the late March to late April time frame in order to fit in the Measures work at the proper time. Measures will have to be run from Japan to Honolulu in order to fit the work in without delaying several other projects later in the year. NSF will investigate the possibility of putting Measures on a Japanese ship as one possible method for running the cruise in the desired westerly direction. MELVILLE will end the year by ending the Yayanos cruise in South Africa and scheduling projects for Beal, Byrne and Dick in late 2002 and early 2003. Beal and Byrne will need to be contacted to find out if this will work since they have both requested early 2002 for their work. There are no UNOLS vessels in the area at the beginning of 2002.

REVELLE: Use REVELLE I schedule also starting the year with the Coale SOFEX work. The HOME projects will have REVELLE in Honolulu in the fall and available for the ROV work for Dunnebier and Garcia as well as HOTS work. Fryer has been postponed to spring 2003 at her request, primarily due to the need to be in the best possible weather window.

THOMPSON: EWING can do Stabeno and will remove this cruise from THOMPSON schedule. This would free up THOMPSON for Bates NOAA work. Tynan cruises are only 40 days apart which limits what other work can be done between them. If ATLANTIS can cover Tynan GLOBEC cruises then THOMPSON can cover Embly and the other JDF work. Weingart cruise needs to start around August 16 to coordinate with Navy assets. THOMPSON should consider scheduling Stabeno's second cruise which is not scheduled, Childress (if needed to free up NEW HORIZON for CALCOFI) or NOAA TAO array servicing at the end of the year. The scheduling of the Dunnebier and Garcia ROV work in Hawaii should come off the THOMPSON schedule unless it makes sense based on a plan for early 2003 to put the ROV on THOMPSON and leave it there for a series of projects in Hawaii and further west. The same may be true for REVELLE.

KILO MOANA: Start mission trials in April. Dennis Clark's MOBY project is potentially interested in doing work during the transit. The Popp cruise contains a lot of transit between stations which are really part of the science plan. This cruise will be a good first cruise to test capabilities. The Moen mapping cruise is scheduled later than requested and is a concern because of potential bad weather conditions for small boat operations. NOAA PI's need to work further on their requirements and determine whether other ships could cover the work or if KILO MOANA can move the schedule earlier. Michaels could go on another ship if necessary.

ATLANTIS: Start on EPR and then transit back to Gulf of Mexico for NOAA work. NOAA would pay transit back to the Gulf. Schedule has large open window in April through end of July with only the

JASON II trials scheduled. Tynan GLOBEC work could be scheduled during the open period and Bowen's JASON II testing cruise could go on another ship such as THOMPSON or be scheduled on ATLANTIS while on the west coast. This might enhance the ability to get to deep enough water for the tests.

BROWN: Work is mostly in the Atlantic with the exception of servicing the TOGA/TAO array late in the year. Will look at adding Boyle to the early Brazil leg. A mandatory shipyard is scheduled in April/May. The TAO array servicing is scheduled for fall and then they return to homeport of Charleston to end the year. Consider scheduling the TAO servicing work on THOMPSON or other Class I vessel.

KNORR: D. Smith and Savage will move to intermediate ships which will allow McCartney hydrography cruise and mooring cruises to go back to back earlier than currently scheduled. Mooring cruise for McCartney cannot be scheduled when his mooring technicians are deployed on the GOULD between March 11 through April 5th. Try to fit Smethie in time window to coordinate with ODEN schedule in spring. Rearrange remainder of schedule to meet other time critical work. The time window for the Mountain Glad 800 Drilling work is Apr to Oct 1st. Beal work in South Africa needs to be scheduled on MELVILLE. NSF will look at the possibility of using barter time on a European ship for the Black Sea work.

HOTS: Need to verify that all HOTS work has been scheduled. Work through June is covered by KOK. July and August are not covered and it may become necessary to find a ship other than KILO MOANA for October and November.

Meeting was adjourned at 4:00 p.m. A scheduling review meeting was held immediately afterwards with the Scheduling Committee Chair, Vice Chair, UNOLS Executive Secretary and program managers from NSF, ONR, NAVO and NOAA. These minutes reflect the proceedings of both meetings.

Ship Tracks

ATLANTIS

KNORR

OCEANUS

EWING

EWING 2

REVELLE

MELVILLE

KILO MOANA

WECOMA