UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

UNOLS NEWS

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BERNIER

M/V BERNIER is currently moored at the State Lines Pier, Fall River, Massachusetts. Considerable input from Lamont, NECOR and National user and oversight committees has resulted in a general plan for the modifications that will convert the vessel into a general-purpose oceanographic vessel. It is expected that bids for the naval architect specifications tasks will be received by mid-May.

Following the appointment of a naval architect, specifications for U.S. Coast Guard approvals and modifications will be submitted to various yards for bids on work to commence in Fall, 1989. It is expected that BERNIER will be converted and ready to join the UNOLS fleet as a general-purpose oceanographic vessel by January 1990.

CONRAD

R/V ROBERT D. CONRAD completed her last oceanographic program with a seismic survey through New York Harbor and upriver to Albany. Despite several close mishaps with competing traffic, the final leg was a successful completion of CONRAD's total 1,160,000 miles of oceanographic research service with the UNOLS fleet. CONRAD will be returned to Navy control immediately following a final INSURV inspection in May. Most of the oceanographic equipment on CONRAD will be transferred to the BERNIER.

WOCE

The NSF Program Announcement for 1990 World Ocean Circulation Experiment (WOCE) field activities has called for WOCE participation in a NOAA cruise in the Pacific. PMEL plans next year to employ a NOAA Class I ship for 60 days to make a section along 150°W (WOCE WHP transect P16) from Hawaii to approximately 60°S. NSF funding would bring the suite of hydrographic measurements planned up to the full WOCE complement.

The U.S. WOCE Hydrographic Program Implementation Panel also has recommended that UNOLS ship time be reserved for two cruises of about 50 days each beginning in late 1990. The first would complete the 90°W transect from Central America to approximately 50°S before making a port call at Punta Arenas, Chile, in January 1991. The second cruise in the first quarter of 1991 would continue the 90°W transect to Antarctica and occupy the 150°W transect from the Ross Sea north to approximately 50°S.

Also in 1990, U.S. WOCE will expand high-resolution measurements made by voluntary observing ships along repeated track lines in the Pacific. Beginning the same year are initial U.S. WOCE deployments of surface drifters and moored instruments in the Pacific. Subsurface floats of the RAFOS type will be put in the South Atlantic Ocean in 1990, in part to test enhanced technical capability.

According to the U.S. WOCE Implementation Plan distributed to the ocean science community this spring, the U.S. will contribute to the one-time global survey, one basin at a time: three years in the Pacific Ocean, then two years in the Indian Ocean, followed by two years in the Atlantic Ocean. The U.S. contribution to repeat hydrography is still under consideration; a panel is exploring ways to use voluntary observing ships to carry out part of the repeat hydrography work.

Other parts of the U.S. WOCE program include support for two ocean-measuring satellite missions, enhanced sea-level measurements, three ocean process studies in the Atlantic, development of ocean circulation models, and improved data management efforts. U.S. WOCE also is supporting a number of technology developments, including improvements to subsurface floats, new data telemetry techniques, development of an automated XBT launcher, improved chlorofluoromethane analysis, and new meteorological sensors.

Either KNORR or MELVILLE can be made available for the WOCE 90°W line and the southern part of the 150°W from Central America to Punta Arenas and thence to Christchurch, New Zealand, according to WHOI and SIO current schedules.

OPERATION ZERO TOLERANCE CONTINUES

On March 20, when the Navy-owned, Scripps-operated UNOLS R/V Thomas Washington arrived at the University of Hawaii Snug Harbor facility in Honolulu, it was greeted by a Customs "strike force" of 15 Customs and USCG personnel, plus sniffer dogs, who did an extremely thorough check of the ship. One gram of marijuana was found under a drawer in the room of one crew member, who was immediately arrested. Later that day the

Honolulu Customs Office notified Captain Tom Desjardins that the ship was seized under the Zero Tolerance Program.

By the end of the scheduled port stay, Customs had agreed to transfer the ship to the status of "constructive seizure," which meant that operations could continue as scheduled, with the requirement that the Honolulu Collector of Customs be provided with the ship's schedule, that Customs could board and inspect it at any time, and that Customs could order the ship returned to their custody at any time. (This is the same status under which Atlantis II operated after a similar seizure in San Diego.) A 30-day period was allowed for the University of California to prepare and submit a petition for release of the vessel. The petition, listing all of the actions taken over the past year to prevent drugs from being brought aboard (including regular ship searches by crew personnel, use of privately-operated "sniffer dogs," indoctrination of crew in detection of drugs and drug use, etc.) has been submitted to Customs; no response has yet been received. WASHINGTON completed its scheduled month of work north of Honolulu, and is currently (May) en route to San Diego, still in "constructive seizure."

It is noteworthy that this is, according to Customs, the first time that Customs has seized a federally-owned vessel, which they claim is within their authority.

KNORR/MELVILLE REFIT

R/V KNORR is currently at the McDermott Shipyard in Amelia, Louisiana, and was lifted out of the water (by a floating crane!) on May 27; cutting in two will start shortly thereafter. **R/V MELVILLE** is operating out of Woods Hole. It will transit to Amelia this fall whenever its present scientific operations are completed, and refit work on it is scheduled to start November 1, 1989.

RIDGE

The RIDGE Office has issued **RIDGE Initial Science Plan, February, 1989.** The plan is available from the RIDGE Office, School of Oceanography, WB-10, University of Washington, Seattle, Washington 98195. This initial science plan, an overview of the first year's planning sponsored by NSF, ONR, USGS and NOAA, addresses a component of the U.S. Global Change Research Program. The primary goal of RIDGE is to understand the geophysical geochemical and geobiological causes and consequences of energy transfer within the global rift system through time. The plan lays out a long-term program strategy and a decadal (1990's) research program. **Program estimates for new ship time are:**

1991	-	8 months	1993	-	17 months
1992	-	12 months	1994	-	23 months

This total of 60 months new ship time would be allocated among five areas of field investigation: global structure/fluxes, 9 months; crustal accretion variables, 22 months; temporal variability, 12 months; mantle/melt experiments, 8 months and event detection/response, 9 months.

THE FY 1989 AND 1990 NSF BUDGET

	88-89 Increase	FY 1990 Request Total	% Increase
RESEARCH AND RELATED			
Math & Physical Sci.	6.6%	$553.5	+10.0%
Engineering	8.7%	$211.2	+12.8%
Bio., Behavioral, Soc.	6.0%	$314.5	+11.7%
GEOSCIENCES	6.9%	$341.3	+10.0%
Comp. & Inform. Sci.	23.6%	$191.2	+25.7%
Sci., Tech. & Int.	16.0%		+15.4%
U.S. ANTARCTIC PROGRAM	5.6%		+18.9%
SCI. AND ENGINEERING ED.	23.9%		+11.1%
TOTAL FOUNDATION	9.8%		+13.9%
In GEOSCIENCES (Earth, Atmospheric, Ocean, Arctic Sciences)			
Requested Increase	$30M (10.0%)	$ 31.0M	(10%)
Actual Increase	$19.6M (6.9%)		
In OCEAN SCIENCES (MG&G, Bio, Phys, Chem, Facilities, ODP)			
Requested Increase	$11.1M (8.2%)	$ 6.7M	(4.1%)
Actual Increase	$11.1M (8.2%)		

OCEAN SCIENCES DIVISION DETAIL

	FY 1988	FY 1989	FY 1990
OCEAN SCIENCES DIVISION	$ 135.3 M	146.2 M	152.9 M
Ocean Sciences Research	67.2 M	71.2 M	74.7 M
Ocean Drilling Program	30.9 M	31.4 M	32.9 M
Oceanographic Facilities	37.2 M	43.6 M	45.3 M
Facilities Detail			
Operations			
Ship Operations	24.9 M*	26.5 M*	27.5 M*
Alvin, Aircraft, etc.	2.0 M	1.3 M	2.0 M
Marine Techs	3.5 M	3.4 M	3.4 M
Acquisition and Development			
Science Instruments	1.8 M	1.6 M	1.6 M
Shipboard Equipment	1.0 M	.9 M	.9 M
Technology Development	2.8 M	4.8 M	4.8 M
AMS Center	0 M	1.8 M	1.8 M
UNOLS, ACQ, MISC	1.2 M	3.3 M**	3.3 M

* Additional $1.5M provided by Ocean Drilling Program

** For acquisition of BERNIER

UNOLS SAFETY STANDARDS AND TRAINING

The **UNOLS Research Vessel Safety Standards**, (last revised and published in May, 1985) are again being updated. A committee of the Research Vessel Operators Committee has reviewed the 1985 edition, added or revised material as appropriate and has circulated a smooth draft to all operators in RVOC. It is anticipated that these new **Safety Standards** will be accepted by RVOC and UNOLS, and will be published during 1989. These **Research Vessel Safety Standards** address design, outfitting and some aspects of operation of research vessels.

RVOC has also recognized the need for a Safety Manual to be used as a basis for training and to indoctrinate marine crews, licensed officers, documented seafarers (and science parties). An RVOC subcommittee has prepared and issued a request for proposals for a safety manual similar to that developed by the North Pacific Fishing Vessel Operator's Association, tailored to the needs of research vessel operation. A contract is being let through the UNOLS Office. The Manual, in fourteen chapters, will cover responsibilities for safety, seamanship, ships equipment and electrical systems, hazardous materials, stability load lines and watertight integrity, damage control, fire, life saving and survival, personal health and safety and watches. The **Safety Manual will be available for UNOLS review in late 1989.**

AGOR-23 STATUS REPORT

The Secretary of the Navy has approved the assignment of the name THOMAS G. THOMPSON to the new AGOR-23.

June 10, 1989 marked the end of the first year in the original 30-month contract awarded to Halter Marine, Inc. for construction of the AGOR-23. Ten modules (of a total of 24) are in various stages of erection, and three of them have been set on the ways and joined together. Purchase orders have been issued by the contractor for most of the major equipment and for work to be subcontracted. The start of machinery installations is scheduled for July, 1989.

Several major change orders for scientific enhancements of the ship have just been issued to the contractor:

- Provide and install a Krupp-Atlas swath mapping system
- Substitute a Markey DESH-9-11WF (double drum, waterfall) winch for the DESH-10 required in the COR, and install it below decks (first Platform) in space originally allocated for scientific stores
- Rearrange the forward end of the Main Deck to convert lab space to scientific stores in order to regain storage lost to the new winch location

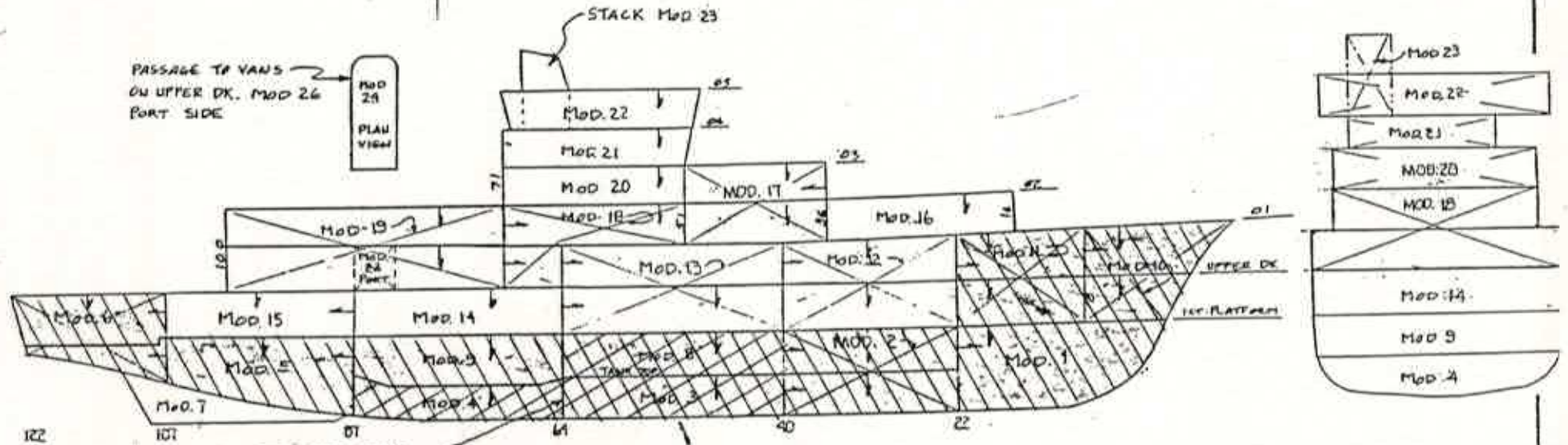
- Raise the forward two vans on the port side from the Main Deck to the 01-Level and create a new lab in the space vacated on the Main Deck (to regain lab space lost forward)

- Relocate the WorkShop on the Main Deck to the 1st Platform and convert the vacated space into a Wet Lab

- Provide and install a Marine Sanitation Device in lieu of a sewage holding tank

The total cost for these changes, plus several other minor changes, is expected to be on the order of $4,000,000. A contractor initiated change, to increase the length of the ship by six feet (to 274' LOA) at no extra cost, has also been approved.

As a result of all the changes awarded so far, the delivery date of the ship has been extended from December 20, 1990 to May 9, 1991.



MODULE BREAKDOWN

DATE: 10-20-88

AGOR-23

Under Construction

Set on Ways

NOTE: — BHD. TO GO WITH MODULE.

TRINITY MARINE GROUP	
AGOR 23	
MODULE BREAKDOWN	
12-14-88	
DRAWN BY	REV 0

PROGRESS REPORT ON THE R/V OSPREY

The R/V OSPREY is nearing the final stages of its conversion from a modern tuna seiner to a very capable and cost effective research platform. Major conversion items recently procured include: the heating/air-conditioning/refrigeration systems, emergency generator and switchboard, and the desalinator and marine sanitation systems. Fabrication work is rapidly proceeding on the superstructure modifications and compartmentalization of the labs and scientist/crew quarters. Additionally, a 750 KW generator dedicated to the slow speed propulsion system has been acquired and installed. The Omnithruster slow speed propulsion system itself has been fabricated and is ready for installation.

Major tasks that need to be performed include final shipyard work to the hull, installation of the slow speed propulsion system and electrical and plumbing systems upgrading. ABS-approved plans needed to accomplish these tasks are being finalized and should be available shortly. After completion, the OSPREY is scheduled for 15 days of sea trials prior to commencement of scientific operations. When completed, the OSPREY will have the characteristics listed in the following description.

General - The OSPREY is a single-screw, raised deck, modern purse seiner design, with bulbous bow, bow thruster and full width deck house. Built as Hull 186 by San Diego Marine Construction in 1973 for the Tuna Fishing Service, it operated for 8 years before lay-up and conversion into a research vessel. The OSPREY was purchased by USC in 1984 and redesigned as a general-purpose research ship by Rados International. John Gilbert Associates served as consultants. The OSPREY has the following characteristics:

Built:	1973
Modified:	1986-1988
Length:	220 feet
Beam:	38.1 feet
Draft:	14.2 feet
Gross Tonnage:	958
Displacement:	1750 tons
Crew:	14
Scientific Personnel:	20-25
Main Engine(s):	(1) Alco 4000 HP turbocharged diesel
Bow Thruster:	Omnithruster
Ship's Service Generators:	(3) 300 KW each (1) 750 KW
Propellor(s):	(1) Five blade SS
Speed, Cruising:	13.5 knots
Speed, Full:	17 knots
Speed, Minimum:	1 knot
Endurance:	75 days
Range:	16,000 nm+
Fuel Capacity:	111,000 gallons
Laboratory (sq. ft.):	
Main:	1000 sq. ft.
Wet:	128 sq. ft.
Ownership:	University of Southern California

WINCHES AND LIFTING EQUIPMENT

Main drag winch with 20,000 feet of 1/2" wire rope
Hydrographic winch with 20,000 feet of 3/16" wire rope
Stern "A" Frame, 30 ton capacity, 30' clearance vertical height under sheaves
Crane I, 75' max. radius, 4,000 lbs. at max. radius
Crane II, 41' max. radius, 1,500 lbs. at max. radius

ELECTRICAL POWER

One 750 KW 440 VAC Main ship
Two 300 KW 440 VAC Main ship
One 300 KW 440 VAC Aux. ship
One 40 KW 440 Emergency ship
One 15 KW 115 VAC UPS (labs)
One 10 KW 115 VAC filtered regulated (labs)
One 10 KW 115 VAC ship's service (labs)
Five Van power (440, 220, 115 VAC)

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FIRST CLASS