UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

UNOLS Ship Scheduling Committee
Report of Meeting

September 19, 1990

Board Room
American Institute of Architects
1735 New York Avenue N.W.
Washington, D.C.

UNOLS Ship Scheduling Committee
Report of Meeting
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American Institute of Architects
1735 New York Avenue, NW
Washington, DC

The UNOLS Ship Scheduling Committee met at 8:30 a.m. in the Board Room, American Institute of Architects, Washington, DC. The meeting was called by **Michael Rawson, Committee Chair.** A list of attendees is Appendix I.

Notification of the meeting and agenda were by UNOLS Office letter dated September 5, 1990 (Appendix II). The letter is also notification and agenda for the **Schedule Review meeting** called by George Keller, UNOLS Chair. Reports for both the **Ship Scheduling** and **Schedule Review meetings** are included here.

Schedules, cost and operating information had been furnished in advance of the meeting. Tables 1 and 2 summarize, for both 1990 and 1991, days of operation, costs and daily rates for the UNOLS fleet. These tables are based on the information provided by operators in advance of the meeting; they reflect neither changes made during the **Ship Scheduling meeting** nor the **Schedule Review meetings** held September 19.

In calling the meeting, **Mike Rawson noted that the June 25, 1990 Ship Scheduling and Schedule Review meetings revealed a very serious mismatch between estimated operating costs for 1991 and Ship operations funds available from Federal agencies. The mismatch had been especially serious for work proposed to NSF.** June, 1990 projections of total operating costs had been in excess of $53 million. The NSF share would have been almost $41 million (see Appendix III). Although similar projections on September 13 (see Table 2) reduced total operating costs to less than $51 million and for NSF to less than $39 million, much larger reductions had to be realized. **The overriding objective of the fall Ship Scheduling and Schedule Review meetings had to enhance fleet schedule efficiency and to pare more than $10 million from total and NSF ship operations funding for 1991.**

ANALYSIS OF COST AND OPERATING INFORMATION FOR 1990

There were no significant changes between the Summary of Ship Use and Costs for 1990 as submitted in September, 1990 and those dated July 4, 1990. (See Table 1 and Appendix III). The 1% increase in total fleet, in ONR and in NSF costs resulted from a small increase in total operating days for intermediate and smaller ships.

TABLE 1

September 13, 1990

Summary of Ship Use and Costs
Year: 1990

SHIP/CLASS	FUNDING								
	NSF		NAVY		OTHER		TOTAL		Daily
	Day	Dollars	Day	Dollars	Day	Dollars	Day	Dollars	Rate
MELVILLE	0	0	0	0	0	0	0	0	N/A
KNORR	0	24	0	-*	0	0	0	24	N/A
ATLANTIS II	147	2,161	70	1,022	64	920	281	4,103	14,601
EWING	114	1,539	86	1,161	1	14	201	2,714	13,500
T.G. THOMPSON	0	65	0	65	0	0	0	130	N/A
T. WASHINGTON	231	2,681	64	743	6	70	301	3,494	11,607
MOANA WAVE	170	1,541	0	0	112	1,016	282	2,557	9,067
CLASS II TOTAL	662	8,011	220	2,991	183	2,020	1,065	13,022	
AVE: (4)	166	2,002	55	748	46	505	266	3,256	12,194
EDWIN LINK	0	0	44	220	95	741	139	961	6,914
ENDEAVOR	137	1,207	88	775	0	0	225	1,982	8,809
OCEANUS	97	892	53	488	16	147	166	1,527	9,199
GYRE	118	767	26	169	68	442	212	1,378	6,500
ISELIN	271	2,380	8	70	0	0	279	2,451	8,785
NEW HORIZON	104	922	34	301	95	842	233	2,065	8,863
SEWARD JOHNSON	12	65	16	125	125	975	153	1,165	7,613
VICKERS	10	123	0	0	0	0	10	123	12,300
WECOMA	190	1,701	50	448	0	0	240	2,149	8,954
CLASS III TOTAL	939	8,057	319	2,596	399	3,147	1,657	13,801	
AVE: (9)	104	895	35	288	44	350	184	1,533	8,660
PELICAN	29	116	0	0	95	380	124	496	4,000
LONGHORN	0	0	41	82	75	170	116	252	2,172
POINT SUR	79	465	81	477	17	100	177	1,042	5,887
CAPE HATTERAS	151	1,190	10	63	24	150	185	1,403	7,584
ALPHA HELIX	105	1,034	0	0	4	39	109	1,073	9,844
R. SPROUL	102	484	6	28	28	133	136	645	4,743
CAPE HENLOPEN	20	120	9	54	11	66	40	240	6,000
WEATHERBIRD II	212	875	9	37	3	12	224	924	4,128
R. WARFIELD	103	550	0	0	0	0	103	550	5,340
CLASS IV TOTAL	801	4,834	156	714	257	1,050	1,214	6,625	
AVE: (9)	89	537	17	82	29	117	135	736	5,067
BLUE FIN	61	113	0	0	36	67	97	180	1,856
LAURENTIAN	25	105	0	0	30	126	55	231	4,200
BARNES	129	232	1	0	24	27	154	259	1,682
CALANUS	55	108	22	43	26	51	103	203	1,971
<CLASS IV TOTAL	270	558	23	43	116	271	409	873	
AVE: (4)	68	140	6	11	29	68	102	218	2,427
FLEET TOTAL	2,672	21,460	718	6,371	955	6,488	4,345	34,321	
AVE: (26)	103	825	28	245	37	249	167	1,320	

* Does not include Navy funds for refit

TABLE 2

September 13, 1990

Summary of Ship Use and Costs
Year: 1991

SHIP/CLASS	FUNDING								
	NSF		NAVY		OTHER		TOTAL		Daily
	Day	Dollars	Day	Dollars	Day	Dollars	Day	Dollars	Rate
MELVILLE	139	2,170	8	125	8	125	155	2,420	15,615
KNORR	253	4,275	0	0	15	253	268	4,528	14,840
ATLANTIS II	246	3,739	14	212	28	426	288	4,377	15,198
EWING	345	5,197	0	0	0	0	345	5,197	15,063
T.G. THOMPSON	83	1,299	71	1,001B.	0	0	154	2,300	14,935
T. WASHINGTON	256	3,351	44	576	0	0	300	3,927	13,089
MOANA WAVE	205	1,948	41	390	47	447	293	2,785	9,505
CLASS II TOTAL	1,527	21,979	178	2,304	98	1,251	1,803	25,534	
AVE: (7)	218	3,139	25	329	14	179	258	3,648	12,281
EDWIN LINK	30	234	0	0	147	1,147	177	1,381	7,800
ENDEAVOR	77	693	158	1,422	0	0	235	2,115	9,000
OCEANUS	118	1,038	128	1,126	0	0	246	2,164	8,797
GYRE	132	951	0	0	46	331	178	1,282	7,202
ISELIN	221	1,879	18	153	0	0	239	2,032	8,502
NEW HORIZON	131	1,156	60	530	48	424	239	2,110	8,827
SEWARD JOHNSON	23	158	71	425	73	569	167	1,152	6,900
VICKERS	165	1,617	0	0	3	29	168	1,646	9,798
WECOMA	223	2,163	42	407	0	0	265	2,570	9,698
CLASS III TOTAL	1,120	9,889	477	4,063	317	2,500	1,914	16,452	
AVE: (9)	124	1,099	53	451	35	278	213	1,828	8,503
PELICAN	0	0	0	0	106	424	106	424	4,943
LONGHORN C.	15	45	0	0	85	255	100	300	3,000
POINT SUR	65	398	89	545A.	19	116	173	1,060	6,127
CAPE HATTERAS	238	1,510	0	0	10	64	248	1,573	6,342
ALPHA HELIX	52	755	0	0	4	58	56	812	14,500
R. SPROUL	136	664	11	54	26	127	173	844	4,881
CAPE HENLOPEN	79	474	5	30	14	84	98	588	6,000
R. WARFIELD	124	690	0	0	0	0	124	690	5,565
WEATHERBIRD II	235	1,136	6	29	0	0	241	1,165	4,834
CLASS IV TOTAL	944	5,672	111	658	264	1,128	1,319	7,456	
AVE: (9)	105	630	12	73	29	125	146	828	6,243
BLUE FIN	86	142	0	0	33	54	119	196	1,647
LAURENTIAN	120	504	0	0	30	126	150	630	4,200
BARNES	124	234	0	0	21	28	145	262	1,807
CALANUS	142	284	14	28	0	0	156	312	2,000
<CLASS IV TOTAL	472	1,164	14	28	84	208	570	1,400	
AVE: (4)	118	291	4	7	21	52	142	350	2,413
FLEET TOTAL	4,063	38,704	780	7,053	763	5,087	5,606	50,842	
AVE: (29)	140	1,335	27	243	26	175	193	1,753	

A. Includes 59 days, 362K for CNOC
B. Includes 30 days, 326K for NAVSEA
C. July, 1991 estimates

ANALYSIS OF COST AND OPERATING INFORMATION FOR 1991

Special circumstances were such that the Table 2 **Summary of Ship Use and Cost, 1991, September 13,** totaled far in excess of federal agency funds available for ship operations: **1. Science program decisions had still not been announced on many proposed shipboard projects. Thus, operators retained these projects on their schedules. 2. In earlier planning, it had been anticipated that KNORR would be operational for almost all of 1991, MELVILLE for most of the year, and THOMPSON for about half the year. These uncertainties in large ship availability confounded agency planning for some of their global-scale programs and confused scheduling throughout the fleet.**

1991 SCHEDULES

Representatives from UNOLS Operating institutions presented schedules and cost information for each ship in the UNOLS fleet. Cost and operating information was as shown in **Table 2.** Detailed individual schedules were as presented on the UNOLS electronic mail bulletin board **SHIP.SCHED91.**

During the presentation of schedules for individual ships, representatives from NSF and ONR provided funding information on nearly all projects scheduled. Projects marked as funded were in almost all cases verified. However, advice was that more than 1,000 days which had been listed as **proposed** would not be funded.

Operators were directed to make additional changes in their schedules, changes aimed at increasing fleet schedule efficiency and holding down total costs. In the Atlantic/Gulf regions, these changes included **assignment of ONR's ML-ML project to an intermediate ship, reassignment of several projects among intermediate ships, thereby eliminating several long transits, a consolidated model for operation of Class IV ships in the mid-Atlantic that would eliminate 1991 operations on at least one and perhaps two ships.** In the Pacific, changes were to **reassign projects in the western Pacific so that only two ships rather than three could support all essential projects, reassign projects among intermediate and large ships in the western and central equatorial Pacific to eliminate several long transits and to change operation of the Class IV ship in Alaska to that of modified day-boat.**

With all changes, NSF-funded operations would be reduced by about 1,100 days, to 2,927; ONR-funded operations would be reduced only slightly, to 769 days, other-funded days would remain unchanged, and the UNOLS fleet would operate for a total of 4,459 days. (See **Appendix III).**

1991 COSTS

Deletion of not-to-be-funded projects, together with other schedule adjustments among individual ships reduced the 1991 UNOLS fleet total approximately as follows:

For 1991	NSF		Navy		Other		Total	
	Days	Dollars	Days	Dollars	Days	Dollars	Days	Dollars
	2,927	$28.5M	769	$ 7.9M	763	$ 5.1M	4,459	$41.5M

(These estimates were, in most cases, not provided by individual operators. They were made by the **Schedule Review Committee,** approximately reflecting the schedule reductions directed during the **Scheduling meeting.)**

Although a number of uncertainties remained (e.g., the approximate nature of the estimates made on September 19, availability dates for KNORR, MELVILLE and THOMPSON, the feasibility of switching projects among ships, ship operations funds available from sponsoring agencies), **preliminary analysis indicated that an adjusted fleet schedule could be fit within available ship operations funds from NSF, ONR and Other sources.**

The fleet schedule, as modified during the meeting, would support all agency-funded projects. (There was the possibility that changes to schedules in the western Pacific would result in the deferral of one or two NSF projects to early 1992.) However, if the KNORR delivery date is delayed significantly, contingencies will have to be developed to support NSF's high priority WOCE work. If MELVILLE is delayed, contingencies will be needed to cover NSF projects in the Atlantic. If THOMPSON is delayed, accommodation must be sought for ONR work in the northeast Pacific.

INFORMATION FROM FUNDING AGENCY REPRESENTATIVES

Don Heinrichs, NSF/OCFS, reported that NSF's budget, as a part of the Federal government budget, was unsettled. **Internal NSF assessments were that the $28 million suggested at the June 25, 1990 scheduling meeting was the highest amount likely for Ship Operations. The probable range was $26-28 million.** Worse case estimates were for about $19 million.

Dolly Dieter, NSF/OCFS, discussed Ship Operations Proposals and urged that they be done carefully, and follow guidelines. **She reiterated that the target date for 1991 proposals was delayed to October 9, 1990.**

Keith Kaulum, ONR, reported that no reductions were expected in ONR's ship operations funds for 1991.

He reported on recent ONR-contracted review of the renovation program on KNORR and MELVILLE. The review had been delivered to RADM Miller, Chief of Naval Research, who will make Navy decisions on the program.

The AGOR-23, THOMAS G. THOMPSON had been launched in early July. The ship will be a superb research platform. Everyone's efforts in developing specifications and the design have really paid off. UNOLS efforts and, later, those of the University of Washington operators are much appreciated.

AGOR-24 and AGOR-25 are in Navy budgets for FY-1992 and FY-1994. ONR will solicit operators for the two ships beginning in October, 1990. The Circular of Requirements (COR) for the two ships is based on AGOR-23; modifications are being developed.

OTHER BUSINESS

The Ship Scheduling Group selected **Ken Palfrey, Oregon State University as Chair and Ron Hutchinson, University of Miami as Vice Chair** for the 1991 scheduling year. The names were to be forwarded to the UNOLS and Council for formal action.

The meeting was adjourned at 4:50 p.m.

UNOLS
Ship Schedule Review
Report of Meeting
September 19, 1990

The review group, Mike Rawson, Chair; George Shor; E. R. Dieter and Don Heinrichs, NSF; Keith Kaulum and June Keller, ONR; and Bill Barbee met immediately after the September 19 UNOLS Ship Scheduling Meeting, at NSF/OCE in Washington, D.C. Jack Bash, selected UNOLS Executive Secretary, was present during the meeting as a non-participating observer.

The meeting followed the **Agenda** (Appendix II), addressing issues in the order reported herein.

REVIEW OF 1991 SCHEDULES

The schedules of all ships were reviewed individually. These reviews were based on the schedules as presented by operators but modified to delete all NSF and ONR projects not funded and with selected projects reassigned to eliminate long transits and enhance overall schedule efficiency. **All of the schedule changes considered by the Schedule Review Group had been flagged to operators at the Ship Schedule meeting.** Recommendations were developed concerning individual ships.

Significant problems identified with the fleet schedule were as discussed during the Ship Schedule Meeting: 1) NSF was committed to a level of WOCE work and ONR to their ML-ML program as well as other programs. With currently-announced availability dates for KNORR and MELVILLE, these commitments could perhaps be met, but significant delays would require development of contingencies affecting many large and intermediate ships. 2) Schedules of the three ships proposing to work in the western Pacific should be examined to see if the work could be supported on only two ships. 3) Schedules of large and intermediate ships in the central and western Pacific should be examined and perhaps rearranged to eliminate some of the long transits. 4) JGOFS field operations in the Pacific were to be deferred until 1992, thereby necessitating an alternative schedule for the THOMPSON. 5) Schedules for the four Class IV ships in the mid-Atlantic should be combined and rearranged so that funded work could be supported with three or fewer ships. 6) Schedules for intermediate ships operating in the Atlantic should be reviewed to see if some projects could be re-assigned to eliminate overall transit time and enhance efficiency. **An overall objective was to develop a UNOLS fleet schedule outline that would support all essential funded work at costs within the funds available.**

After reviewing and recommending adjustments to individual ships, adjusted costs were estimated.

Adjusted Summary of Ship Use and Costs
1991

Ship Class	NSF		Navy		Other		Total	
	Days	Dollars	Days	Dollars	Days	Dollars	Days	Dollars
Class II	1,287	17,915	153	2,820	98	1,251	1,538	21,986
Class III	734	6,493	515	4,453	317	2,500	1,566	13,446
Class IV	600	3,433	87	589	264	1,128	951	5,150
<Class IV	306	639	14	28	84	208	404	875
Total	2,927	28,480	769	7,890	763	5,087	4,459	41,457

Agency representatives agreed that the fleet schedule outlined and the costs estimated for 1991 were workable.

The UNOLS members of the review group developed letter recommendations for each ship listed on Table 2. The letter recommendations were to be presented to the UNOLS Chair and Council on September 20. (Note that the letters were sent by George Keller, UNOLS Chair, to UNOLS Member institutions on September 28, 1990.

SHIP SCHEDULING MEETING
Washington, DC - September 19, 1990

Attendees:

Timothy M. Askew, Harbor Branch Oceanographic Institution
Rodger W. Baier, National Science Foundation
William D. Barbee, UNOLS Office
Howard S. Barnes, Bermuda Biological Station for Research
John F. Bash, University of Rhode Island
Douglas C. Biggs, Texas A&M University
Don Boesch, University of Maryland
Larry Clark, National Science Foundation
Joe Coburn, Woods Hole Oceanographic Institution
W. Thomas Cocke, U.S. Department of State
Bruce K. Cornwall, Johns Hopkins Univ+ersity
James W. Coste, University of Hawaii
Patrick Dennis, Joint Oceanographic Institutions, Inc.
Emma R. Dieter, National Science Foundation
Rose Dufour, Scripps Institution of Oceanography
David Epp, National Science Foundation
Barbara Funke, UNOLS Office
Linda M. Goad, University of Michigan
Judith Gray, National Oceanic & Atmospheric Administration
George D. Grice, Woods Hole Oceanographic Institution
William B. Hahn, University of Rhode Island
Donald F. Heinrichs, National Science Foundation
David Hurd, National Science Foundation
Ron Hutchinson, University of Miami
K. William Jeffers, University of Washington
Tom Johnson, DUKE/University of North Carolina
Keith Kaulum, Office of Naval Reaserch
Junko Kazumi, National Science Foundation
June E. Keller, Office of Naval Reaserch
Richard B. Lambert, National Science Foundation
Sherrye McGregor, National Science Foundation
Thomas C. Malone, University of Maryland
Don Moller, Woods Hole Oceanographic Institution
Don L. Newman, University of Southern California
Wadsworth Owen, University of Delaware
Kennard M. Palfrey, Oregon State University
Mike Prince, Moss Landing Marine Laboratories
Steve C. Rabalais, Louisiana Universities Marine Consortium
Michael Rawson, Lamont-Doherty Geological Observatory
Michael R. Reeve, National Science Foundation
Thomas C. Royer, University of Alaska
Ron Schlitz, National Science Foundation
George Shor, Jr., Scripps Institution of Oceanography
Tom Spence, National Science Foundation
John M. Tokar, National Oceanic & Atmospheric Administration
Joseph F. Ustach, DUKE/University of North Carolina
John Waterbury, Woods Hole Oceanographic Institution
Richard West, National Science Foundation

UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

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of university oceanographic facilities

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September 5, 1990

TO: UNOLS Ship Scheduling Committee

CC: UNOLS Members
Federal Agency Representatives

FROM: William D. Barbee
Executive Secretary, UNOLS

SUBJECT: Schedule Meeting, September 19, 1990

The fall, 1990 meeting of the UNOLS Ship Scheduling Committee has been called:

Board Room
American Institute of Architects
1735 New York Avenue NW
Washington, DC
8:30 a.m.
September 19, 1990
(Expect to adjourn by midafternoon)

The objectives of the meeting are:

1. to reach solid ship schedules for 1991,
2. insofar as possible, to resolve remaining funding uncertainties (but note recent e-mails from UNOLS Office and from E. Dieter and D. Heinrichs),
3. to examine and summarize schedules and costs projected for 1991,
4. to select Chair and Vice Chair for 1991.

A Schedule Review Meeting will be held later on June 26 to review and analyze 1991 schedules and to formulate recommendations.

WDB/cml
Enclosures

AGENDA
UNOLS Ship Scheduling Meeting
Board Room
American Institute of Architects
1735 New York Avenue NW
Washington, DC
8:30 a.m., Wednesday, September 19, 1990

The Ship Scheduling Committee will be called into session by Mike Rawson, Chair.

Briefing on UNOLS Ship Scheduling Process for 1991. Mike Rawson, together with NSF and ONR representatives, will brief the Scheduling Committee on the process for the timely development of Operational Schedules for 1991.

Projections of Fleet Schedules and Costs for 1991. Based on cost and operating information provided earlier on telemail, Scheduling Committee Chair will present an overview for 1991. Funding/scheduling problems for 1990 can, hopefully, be resolved.

Schedules for 1991. Individual presentations by institutions of their near-final schedules for 1991 and projected costs. (Should be as you submitted via telemail.) Identify problems: Schedule deficiencies, etc. Recap 1990 problems only as necessary. If you have any questions on the funding status of any cruise(s) on your schedule, check with agency Science Program reps and resolve! You may want vu-graphs, for your presentations.

Information from Funding Agency Representatives. From NSF, ONR and other agencies as desired, on 1991 ship ops funding available, ship days required by science programs, science funding decisions available. NSF representatives will review changes in proposal guidelines for marine technician, instrumentation, shipboard equipment and ship ops proposals for 1991.

1991 Schedule Refinement. Scheduling Committee Chair will provide direction and moderate discussion on schedule problems. Preliminary evaluation of overall fleet schedule efficiency. This discussion should provide a starting point for Schedule Review Meeting to be held later on September 19, and begin the development of recommendations to UNOLS and agencies on 1991 scheduling.

Recommendations. Ship Scheduling Committee recommendations to go forward to the UNOLS Council, Operating Institutions or funding agencies as appropriate will be developed at the Schedule Review Committee.

Elect Chair, Vice Chair for 1991. The Chair should be from the West Coast, the Vice Chair from the East Coast. The Chair is ex officio on the UNOLS Council.

WHAT TO PROVIDE FOR THE SHIP SCHEDULING MEETING, SEPTEMBER 19, 1990

1. By telemail to SCHEDULERS.EAST.GULF or SCHEDULERS.WEST, not later than September 10, 1990:

   a. Cost Information for 1990 and 1991:

1990	NSF	Navy	Other	Total
Ship Days				
Ship $K				

1991	NSF	Navy	Other	Total
Ship Days				
Ship $K				

   b. Schedules for 1990 and 1991, in approved format. You will not need to bring extra copies of the material in a 1a and 1b if you have submitted the material via telemail by September 10.

2. Summaries of funded 1991 Shiptime Requests not filled. Please bring 10 copies of any unfilled funded 1991 Ship Time Requests that you hold. If you don't KNOW it's filled, list it.

3. NEW THIS YEAR. Narrative description of each ship's 1991 schedule. One paragraph saying where and when ship is scheduled, kind of work (e.g., Spring Bloom Studies) and time constraints on any projects. List any problems that you foresee (e.g., 90 days still not funded). Blue water ships should also provide a map with schedule track; ships whose work is all regional (at home) needn't provide a chart. Ten copies, please.

AGENDA
UNOLS Schedule Review Meeting
National Science Foundation
Ocean Sciences Division
1800 G Street NW
6:00 p.m., or earlier if possible
Wednesday, September 19, 1990

The group of Mike Rawson, George Shor, Dolly Dieter, Keith Kaulum and Bill Barbee will meet to review ship schedules for 1991.

The review will include:

1. Analysis of match between prospective funding and estimated ship operations costs;

2. Review 1991 schedules on individual ship, regional and fleet basis; recommendations to increase ship, regional and fleet efficiency;

3. Address any specific problems (e.g., extensive transits, science projects not accommodated, marginal schedules, regional/fleet inefficiencies);

4. Develop guidance letters for each ship/institution (to include general fleet schedule/funding questions and specific ship/institution questions);

5. Formulate recommendations for transmittal to UNOLS Council, agencies, UNOLS institutions. (Cover: funding match, potential lay-ups, reassignments, retirements, etc., schedule efficiency of individual ships, regions, over-all fleet, and rationalize any P.I. not accommodated.)