

UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

**UNOLS Ship Scheduling Committee
Report of Meeting
July 12, 1989**

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



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The UNOLS Ship Scheduling Committee met at 1 p.m. in the Board Room, American Institute of Architects, Washington, D.C. The meeting was called by George Shor, co-Chair, together with Mike Rawson. A list of attendees is appended (I).

Notification of the meeting, agenda and requests for scheduling, operating and cost-information were by UNOLS Office letter dated June 8, 1989 (Appendix II).

George Shor gave a summary projection for 1990 UNOLS Ship Operations, based on schedules and cost summaries provided through electronic mail by UNOLS operators.

Based on information available before July 10, and using the lay-up criterion developed by the RVOC, only about eight ships have solid schedules, four are very poor. The rest are either special cases, have not provided adequate information or are marginal.

According to the RVOC criteria, satisfactory schedules (funded cruises plus one-third of proposed projects) should total for Class II-216 days, Class III-200 days, Class IV-176 days and for ships smaller than Class IV-160 days.

Ships Meeting Criteria: ISELIN, MOANA WAVE, NEW HORIZON, POINT SUR and THOMAS WASHINGTON. In addition, three ships will be out of service for part of 1990 (renovation or conversion) and for the balance of the year meet adjusted criteria: BERNIER, KNORR and MELVILLE.

Most UNOLS ships do not meet RVOC criteria, but nevertheless project significant use days for 1990 (projected by formula/class criteria):

1. ALPHA HELIX	123/176	6. ENDEAVOR	141/200
2. ATLANTIS II	175/216	7. OCEANUS	171/200
3. BARNES	145/160	8. WARFIELD	101/160
4. CALANUS	143/160	9. WECOMA	115/200
5. CAPE HATTERAS	149/176		

Eight ships were either far below RVOC criteria or provided insufficient information:

- | | | |
|-----------------------------|-----------------------------------|--------|
| 1. BLUE FIN (insuff. info.) | 5. PELICAN | 26/160 |
| 2. CAPE HENLOPEN 47/176 | 6. R.G. SPROUL | 77/176 |
| 3. GYRE 107/200 | 7. OSPREY | 22/200 |
| 4. LAURENTIAN 65/160 | 8. BBO's New Ship (insuff. info.) | |

Of these last eight ships, several have traditionally operated under circumstances wherein the criteria do not apply.

If the Summaries of Fleet Use and Costs for 1989 and 1990 (Appendix III) are accepted, 1990 ship use will be up from that in 1989, and, overall, available ship time will be well employed:

	1989	1990	Change
Total days	4014	4879	22%
\$M	31.87	40.85	28%
NSF Days	2981	3656	23%
\$M	23.99	30.12	26%
ONR Days	565	602	7%
\$M	4.92	6.18	26%
Other Days	468	621	32%
\$M	2.96	4.55	54%

Note that 1989 ship use was the lowest of any year in the 1980's. That total costs would increase by a greater percentage than do use days reflects the higher availability and use of large ships in 1990 over 1989. **The large portion of projected ship use days based on science projects for which funding decisions have not yet been made are indication that not all of the 4879 days and \$40.85 million projected will be realized.** Nevertheless, the shortfall projected is much smaller than is usual for preliminary schedule meetings (see the Profile of Funding Cycles, 1989 Cost Projection, Appendix IV).

Schedules for 1990. Individual operators presented scheduling, cost and operating information for 1989 and 1990, as summarized in Appendix III. (The summaries herein include information received through July 31, and thus reflect a number of adjustments made during the July 12 meeting.) **The schedules projected for individual ships are characterized:**

ALPHA HELIX: 227-day schedule in Gulf of Alaska, Prince William Sound and Bering Sea. Work related to oil spill in addition to traditional schedule.

ATLANTIS II: After six-week shipyard period, support ALVIN work in Gulf of Mexico then northeast Pacific from Galapagos to Gorda-Juan de Fuca to California coast and Fieberling Guyot. Support from NSF, ONR, NOAA and others.

BERNIER: Hopes to become operational in February. Ambitious schedule with work in north and south Atlantic, perhaps into southeast Pacific.

BARNES: Approximately 145 days, mostly in Puget Sound, supported by NSF, ONR and others. Could accommodate additional work in Puget Sound.

BLUE FIN: Schedule under development for estimated 100 days, all in Georgia Bight. Additional regional work can be accommodated.

CALANUS: Scheduled for 128 days in Bahamas and Florida Keys. Could accommodate more shallow water work in region throughout the year.

CAPE HATTERAS: 247-day schedule on continental margin from North Carolina shelf to Gulf of Maine, Caribbean and Sargasso Sea. NSF, DOE, State and ONR.

CAPE HENLOPEN: Very sparsely scheduled; mid-Atlantic and Chesapeake Bay. Needs more work.

ENDEAVOR: Modest schedule (212 days) in western Atlantic, Gulf of Maine, Sargasso, Caribbean and Gulf Stream. Open September and after.

GYRE: Light schedule in Gulf of Mexico and Bermuda-Miami. Open June, September-October and December.

ISELIN: Solid 240-day schedule, Caribbean, Amazon Fan (twice), Caribbean, Bahamas and Puerto Rico. Could accommodate work after October.

KNORR: After shipyard renovation (30 April), work in north Atlantic to September, then southeast Pacific WOCE transect.

LAURENTIAN: Seasonal (mid-April to mid-October) work in Lake Michigan. NSF, State and ONR.

MELVILLE: After shipyard renovation (31 August), one Atlantic project, Canal transit and northeast Pacific work in Fieberling Guyot.

MOANA WAVE: 280 days scheduled, cable survey Honolulu to Guam, western Pacific projects, then near Hawaii and eastern equatorial Pacific.

NEW HORIZON: Schedule from among 300 days' request, all in northeast Pacific. NSF, UC, DOE, NASA, NOAA and ONR sponsorship.

OCEANUS: 270 days scheduled in north Atlantic with transect to near Recife and Gulf of Panama.

OSPREY: Projects scheduled in June, July and September off west coast. Needs work throughout the year.

PELICAN: 61 days scheduled locally, inshore Gulf of Mexico. NSF, State and NOAA sponsored. Needs work throughout the year, especially March-May.

POINT SUR: 175 days scheduled, California coastal waters and midway to Hawaii. NSF, Navy (CNO and ONR) and State sponsored. Could accommodate more work.

ROBERT G. SPROUL: After overhaul (1 March), modest schedule, California coastal waters and Columbia River. NSF, ONR sponsored. Additional projects are expected and can be accommodated.

RIDGELY WARFIELD: 124 days scheduled in Chesapeake Bay, all NSF. It was announced that the Chesapeake Bay Institute of Johns Hopkins University will close in December, 1991. The University of Maryland Center for Environmental and Estuarine Studies has proposed to operate the **WARFIELD**.

THOMAS WASHINGTON: Two alternative world-wide schedules, each of about 340 days. Includes work throughout the Pacific and in south Atlantic. Funding from NSF and ONR.

WECOMA: Schedule for 250-275 days, Oregon coastal, to Guam, equatorial Pacific, then Oregon coastal.

New Ship (Bermuda Biological Station): Scheduled 250 days of station and section work near Bermuda.

INFORMATION FROM FUNDING AGENCIES:

Bruce Malfait, NSF/OCFS noted that E. R. Dieter was aboard as Manager, Ship Operations Program, NSF/OCE/OCRS.

NSF had recently notified operating institutions via electronic mail to submit incremental budgets for 1989 operations. Representatives urged operators to respond without delay.

Operators were also reminded that Ship Operations proposals are due 1 October 1989. Operators were also reminded that 1989 is a third year, so proposals for 1990 must be full, new proposals.

NSF budget projections for 1990 ship funding were not firm. Reference was made to National Science Foundation FY 1989 and 1990 Budget Estimates (as shown in UNOLS NEWS, v 6, # 1, June, 1989):

OCEAN SCIENCES DIVISION DETAIL

	<u>FY 1988</u>	<u>FY 1989</u>	<u>FY 1990</u>
OCEAN SCIENCES DIV	\$135.3M	\$146.2M	\$152.9M
Ship Operations	24.9M	26.5M	27.5M
From ODP	<u>1.5M</u>	<u>1.5M</u>	<u>1.5M</u>
	26.2M	28.0M	29.0M
Deficit Red*	+4.0	-4.0	**
	30.2	24.0	??

*'89 funds used in '88

** Uncertain level of levies, congressional reductions, etc.

In 1989, NSF Ship Operations started in a \$4.5 million hole, because FY-1989 funds were used to support some fourth-quarter CY 1988 operations. Careful control of 1989 ship operations (see **Summary of Fleet Use and Costs**, Appendix III) allowed reduction of this deficit to less than \$500,000. Best information was that "for planning 1990 should be about level with 1989." Thus, plan for NSF ship operations funding of \$28 million plus.

Keith Kaulum made the advise that ONR will continue in 1990 to block \$5 million for academic fleet ship operations. The formula, 55% from the ship operations block to match 45% from science program funds will be continued. Since the reason for establishing the \$5 million block for ship operations was to raise ONR ship support to a more appropriate level, managers are reluctant to reduce the science program share of funding. ONR ship funding in 1989 was down at least \$1 million. **ONR funding for UNOLS ship operations:**

1989 - \$4.9 million
 1990 - \$5.3 million* (at least)

*Institution estimates, including \$378K from CNOC, are \$6.2 million (Appendix III).

Bonnie McGregor advised that USGS hoped to support some BERNIER work in 1990 and would certainly support some in 1991.

Assessment of Scheduling Process. Use of electronic mail to distribute tentative schedule and cost information has made scheduling meetings more effective. The process can be further improved if operators are careful to list P.I.'s and not chief scientists to identify cruises/projects and if operators will include grant/proposal numbers (if known) to identify projects. Both of these requests will speed the flow of information on science project funding.

During the meeting (and before), significant changes were made, shifting projects among ships, eliminating multiple bookings, etc. (Several of those changes are reflected in appended cost information.)

SHIP SCHEDULING MEETING
American Institute of Architects
1735 New York Avenue, NW - Washington, DC

July 12, 1989

Attendees:

William D. Barbee, UNOLS
John F. Bash, University of Rhode Island
Garrett W. Brass, University of Miami
Larry Clark, National Science Foundation
Joe Coburn, Woods Hole Oceanographic Institution
Bruce Cornwall, Johns Hopkins University/CBI
James W. Coste, University of Hawaii Research Corporation
E. R. Dieter, National Science Foundation
Barbara Funke, UNOLS
George Grice, Woods Hole Oceanographic Institution
James Griffin, University of Rhode Island
Ron Hutchinson, University of Miami
William K. Jeffers, University of Washington
Thomas C. Johnson, Duke/UNC Oceanographic Consortium
Keith Kaulum, Office of Naval Research
George H. Keller, Oregon State University
Richard B. Lambert, National Science Foundation
Dean Letzring, Texas A&M University
Lisa Lynch, National Science Foundation
Bonnie MacGregor, U.S. Geological Survey, Menlo Park
Bruce Malfait, National Science Foundation
Don Moeller, Woods Hole Oceanographic Institution
Donald Newman, University of Southern California
Wadsworth Owen, University of Delaware
Kennard Palfrey, Oregon State University
Michael Prince, Moss Landing Marine Laboratories
Steve Rabalais, Louisiana Universities Marine Consortium
Michael Rawson, Lamont-Doherty Geological Observatory
David Rea, University of Michigan
George G. Shor, Jr., Scripps Institution of Oceanography
Thomas Smith, University of Alaska
Hawley Thomas, Minerals Management Service
Richard W. West, National Science Foundation
James Williams, Scripps Institution of Oceanography

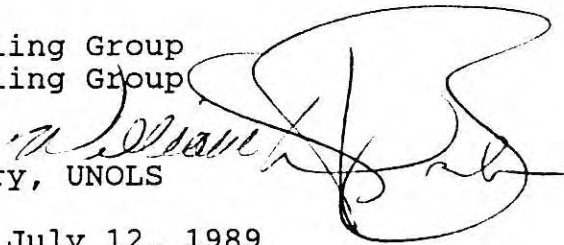
UNIVERSITY-NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

An association of institutions
for the coordination and support
of university oceanographic facilities

UNOLS Office, WB-15
School of Oceanography
University of Washington
Seattle, Washington 98195
(206) 543-2203

June 08, 1989

TO: East Coast Scheduling Group
West Coast Scheduling Group

FROM: William D. Barbee 
Executive Secretary, UNOLS

SUBJECT: Schedule Meeting, July 12, 1989

The first 1989 meeting of the UNOLS Ship Scheduling Group has been called:

Board Room
American Institute of Architects
1735 New York Avenue NW
Washington, DC
July 12, 1989 -- 1 p.m.-5 p.m.

The objectives of the meeting are: 1) quickly review operations, schedules and costs for 1989, to reveal changes, surprises, problems and 2) examine and summarize costs and schedules projected for 1990. Costs and schedules for both 1989 and 1990 will have been provided by UNOLS operating institutions (via SCHEDULERS.EAST.GULF or SCHEDULERS.WEST) and appropriate information is on SHIP.SCHED90 or SHIP.SCHED89. Summaries of cost information will be provided (in format similar to attachments to this letter) along with a comparison of fleet totals with NSF and ONR ship operations funding for 1990.

Materials for the meeting

1. Cost Information for 1989 and 1990. Send your cost information, via telemail to SCHEDULERS.EAST.GULF or SCHEDULERS.WEST not later than 30 June 1989. The format/information is:

1989:	NSF	NAVY	OTHER	TOTAL
Ship Days				
Cost \$K				
1990:	NSF	NAVY	OTHER	TOTAL
Ship Days				
Cost \$K				

The UNOLS Office will summarize the costs received from all UNOLS members for both 1989 and 1990 as on the summaries attached here (dated November 15, 1988). **Copies will be provided at the July 12 meeting; you needn't bring extras if you have responded by telemail before 30 June.**

2. Schedules for 1989 and 1990. Please provide your latest/best schedule for both 1989 and 1990 not later than 30 June to **SCHEDULERS.WEST** or **SCHEDULERS.EAST.GULF**. The UNOLS office will enter them on **SHIP.SCHED89** or **SCHED90**. (Note that although **SHIP.SCHED90** has been up since 1 April, there are no 1990 schedules for **ALPHA HELIX, BARNES, LAURENTIAN, MOANA WAVE, PELICAN** or **SPROUL**.) If everyone complies by providing schedules via telemail they needn't bring multiple copies to the meeting.

3. Summary of Unfilled 1990 Shiptime Requests. Please bring 10 copies of a summary of any unfilled 1990 ship time requests that you hold. **If you don't know it's filled, list it.**

4. You may want to bring vu-graphs (overhead projections) to help explain/present your 1989 and 1990 schedules. Whatever's fair.

Agenda and 1988 (old) and 1989 cost summaries are attached.

WDB/df
Attachments

AGENDA
UNOLS Ship Scheduling Meeting
Board Room
American Institute of Architects
1735 New York Avenue NW
Washington, DC
1 p.m.
Wednesday, July 12, 1989

The Scheduling Groups will be called into session by Chairs George Shor and Mike Rawson. Emphasis will be on projecting funding, costs, ship requirements and schedules for 1990.

Projection of Fleet Schedules and Costs for 1990. Based on cost and operating information provided earlier via telemail George Shor/Mike Rawson will present an overview for 1990. Potential problems will be identified. Any funding/schedule problems remaining from 1989 can, hopefully, be resolved.

Information from Funding Agency Representatives. From NSF, ONR and other agencies as desired, on 1990 funding available, total ship days required by science programs, science decisions available. Recap of 1989 schedule/funding problems as necessary.

Schedules for 1990. Individual presentations by institutions of their tentative schedules for 1990 and projected costs. (Should be as you submitted via telemail). Identify problems: unfunded projects, multiple bookings, schedule inefficiencies, etc.) Explicit list of unfilled 1990 shiptime requests. Recap 1989 problems as necessary. (Institution reps need only bring vu-graphs for their presentations and summary of unfilled requests.)

1989 Schedule Improvement: Chairs will provide direction and moderate discussion on schedule problems (eliminate multiple bookings, accomodate unmet requests, address funding mismatch, improve schedule efficiencies).

Recommendations. Discuss and adopt as appropriate, recommendation to go to UNOLS Council (July 13,14).

July 31, 1989

**Summary of Fleet Use and Costs
Year: 1989**

SHIP/CLASS	FUNDING							
		NSF		ONR		OTHER		TOTAL
	Days	Dollars	Days	Dollars	Days	Dollars	Days	Dollars
MELVILLE	b. 153	1839	74	889	1	12	228	2740
KNORR	0	0	0	0	0	0	0	0
ATLANTIS II	202	3151	16	250	23	359	241	3760
CONRAD	58	737	42	534	3	38	103	1309
T. WASHINGTON	c. 230	2557	23	256	8	88	261	2901
MOANA WAVE	248	2335	6	57	4	38	258	2430
CLASS II TOTAL	891	10619	161	1986	39	535	1091	13140
AVE: (5)	178	2124	32	397	8	107	218	2628
ENDEAVOR	193	1500	40	310	23	178	256	1988
OCEANUS	222	1887	24	204	0	0	246	2091
GYRE	90	501	0	0	53	281	143	780
ISELIN	175	1468	52	436	0	0	227	1905
NEW HORIZON	d. 66	582	70	617	46	406	182	1605
OSPREY	30	300	0	0	0	0	30	300
WECOMA	154	1309	65	553	0	0	219	1862
CLASS III TOTAL	930	7547	251	2120	122	865	1303	10531
AVE: (7)	133	1078	36	303	17	124	186	1504
PELICAN	17	74	0	0	71	331	88	405
POINT SUR	f. 56	347	89	552	21	130	166	1029
CAPE HATTERAS	195	1260	0	0	13	81	208	1341
ALPHA HELIX	115	1265	0	0	46	506	161	1771
R. SPROUL	e. 86	400	17	79	14	65	117	544
CAPE HENLOPEN	87	574	19	125	25	165	131	865
R. WARFIELD	121	670	0	0	0	0	121	670
CLASS IV TOTAL	677	4590	125	756	190	1278	992	6625
AVE: (7)	96	656	21	126	27	183	142	946
BLUE FIN	46	114	0	0	31	76	77	190
LAURENTIAN	55	220	0	0	11	44	66	264
BARNES	80	161	2	1	20	30	102	192
CALANUS	a. 99	229	20	46	45	104	164	379
WEATHERBIRD/NEW	203	511	6	14	10	24	219	549
< CLASS IV TOTAL	483	1235	28	61	117	278	628	1574
AVE: (5)	97	247	6	12	23	56	126	315
FLEET TOTAL	2981	23991	565	4923	468	2956	4014	31870
AVE: (24)	124	1000	24	205	20	123	167	1328

- a. NOAA 45 days, \$104K
b. JOI 1 day, \$12K
c. UC 4 days, \$44K, JOI 4 days, \$44K
d. UC 46 days, \$406K
e. UC 14 days, \$65K
f. ONR includes NPS (CNOC) 75 days, \$465K

July 31, 1989

**Summary of Ship Use and Costs
Year: 1990**

SHIP/CLASS	FUNDING							
	NSF		ONR		OTHER		TOTAL	
	Days	Dollars	Days	Dollars	Days	Dollars	Days	Dollars
MELVILLE	35	447	62	793	0	0	97	1240
KNORR	149	1952	28	367	35	459	212	2778
ATLANTIS II	a. 197	2704	77	1057	39	535	313	4296
BERNIER	217	2930	117	1580	0	0	334	4510
T. WASHINGTON	344	3914	0	0	0	0	344	3914
MOANA WAVE	f. 178	1669	0	0	102	957	280	2626
CLASS II TOTAL	1120	13616	284	3797	176	1951	1580	19364
AVE: (6)	187	2269	47	633	29	325	263	3227
ENDEAVOR	158	1343	54	459	0	0	212	1802
OCEANUS	217	1595	48	353	6	44	271	1992
GYRE	107	696	0	0	23	150	130	846
ISELIN	216	1815	26	219	0	0	242	2033
NEW HORIZON	b. 180	1404	22	172	98	766	300	2342
OSPREY	52	624	0	0	0	0	52	624
WECOMA	206	1854	69	621	0	0	275	2475
CLASS III TOTAL	1136	9331	219	1824	127	960	1482	12114
AVE: (7)	162	1333	31	260	18	137	212	1730
PELICAN	26	120	0	0	35	161	61	281
POINT SUR	d. 95	599	65	410	15	95	175	1103
CAPE HATTERAS	205	1223	10	60	32	191	247	1474
ALPHA HELIX	171	1881	0	0	56	616	227	2497
R. SPROUL	c. 133	580	4	17	8	35	145	632
CAPE HENLOPEN	56	370	0	0	29	191	85	561
R. WARFIELD	124	657	0	0	0	0	124	657
CLASS IV TOTAL	810	5430	79	487	175	1289	1064	7205
AVE: (7)	116	776	11	70	25	184	152	1029
BLUE FIN	50	100	0	0	50	100	100	200
LAURENTIAN	39	156	16	64	30	120	85	340
BARNES	123	259	4	6	18	34	145	299
CALANUS	e. 128	282	0	0	45	99	173	381
NEW SHIP	250	950	0	0	0	0	250	950
< CLASS IV TOTAL	590	1747	20	70	143	353	753	2170
AVE: (5)	118	349	4	14	29	71	151	434
FLEET TOTAL	3656	30124	602	6178	621	4553	4879	40853
AVE: (25)	146	1205	24	247	25	182	195	1634

- a. NOAA 39 days, \$535K
b. UC 32 days, \$250K, DOE 32 days, \$250K, NOAA 17 days, \$133K, NASA 7 days, \$55K, JOI 10 days, \$78K
c. DOE 8 days, \$35K
d. ONR includes NPS (CNOC) 60 days, \$378K
e. NOAA 45 days, \$99K
f. SSI (private) 102 days, \$933K

PROFILES OF FUNDING CYCLES \$ MILLION

	OP DAYS	NSF	ONR	OTHER	TOTAL	SHORT FALL
1987	4,649	28.0	5.7	4.0	37.8	-
1988	4,731	28.7	6.0	4.2	39.0	-

1989 Cost Projections

	NSF		ONR		OTHER		TOTAL	
	Days	Dollars	Days	Dollars	Days	Dollars	Days	Dollars
July 1988 (Anticipated)	3,798	29.55	426	3.44	358	1.90	4,582	34.89
Proj. Shortfall		26.8 (2.7)		4.3 0.9		1.9 -		33.4 (1.8)
October 1988 (Anticipated)	3,333	26.17	486	3.68	3.88	2.80	4,207	32.65
Proj. Shortfall		24.-26. ?		3.68 -		2.80 -		30.5-32.5 ?
July, 1989 (Anticipated)	2,981	23.99	565	4.92	468	2.96	4,014	31.87
Proj. Shortfall		24.* -		4.9 -		3.0 -		31.9 -

*provides deficit cancellation

**SHIP OPERATIONS
SUMMARY OF 1990 PROJECTIONS
\$ MILLION**

	NSF		ONR		OTHER		TOTAL	
	Days	Dollars	Days	Dollars	Days	Dollars	Days	Dollars
July 1989 (Anticipated)	3,656	30.12	602	6.18	621	4.55	4,879	40.85
Proj. Shortfall		28-29?*		6.2		4.6		38.8-39.8
		(1M-2M)		-		-		(1M-2M)

*NSF representatives did not provide a solid figure. Uncertainties include additional deficit reduction (500K?), possible levies against Ocean Sciences Division and the Congressional appropriation.