

East Coast Ship Scheduling Group
West Coast Ship Scheduling Group
Report of Joint Meeting
October 30, 1986
Conference Rooms A and B
American Institute of Architects
1735 New York Avenue N.W.
Washington, D.C.

East and West Regional Ship Scheduling Groups met separately (8:30 a.m.) and jointly (1 p.m.) at the American Institute of Architects, Washington, D.C. The separate meetings were chaired by Robertson P. Dinsmore (East) and George Shor, Jr. (West).

Notification of and information on the meetings, including an agenda (Appendix I) were distributed by UNOLS Office letter dated October 3, 1986. Although material was collected from individual institutions for 1986 schedules, operations and agency support, that material was not reviewed during the meetings. Most of the meeting was devoted to: reaching an effective fleet schedule for 1987 that accommodated all funded science projects and was comprised of efficient schedules for individual ships and to examine all suggestions for improving the UNOLS ship scheduling process.



Schedules, Costs and Funding for 1986. Estimates for 1986 operating days and costs are attached (Appendix II). These estimates were not reviewed during meetings. Comparison with similar estimates made June 3, 1986 reveals: days of operation have been decreased from 4,370 to 4,300 (the lowest total in the 1980's), although most individual ship cost estimates were less than in June, inclusion of cost for WECOMA resulted in NSF and total cost estimates nearly the same as in June.

Ship Schedules, operating costs and agency support for 1987. Schedules for 1987 occupied nearly all of the individual meetings and a significant part of the joint meeting.

Efforts to achieve efficient schedules for 1987 were effective and cooperative. Most duplicate bookings had already been eliminated; the few remaining were quickly resolved. Schedules advanced for individual ships were credible (i.e., based almost entirely on already-funded science projects).

Realistic cost estimates were advanced, and total costs had nearly closed with estimates of total funding available. (See tables below and Appendix III).

A total of 4,937 days are scheduled, about 400 days more than the average for the 1980's, and more than 600 days over the 1986 total. The days finally operated during 1987 will doubtless be less than currently estimated but that reduction will be less than the similar reduction in earlier years. (See, for example estimates for 1986 made in October, 1985: 5,310 days at a cost of \$41.8 M.)

East Coast Ship Schedules. The East Coast portion of the UNOLS fleet is not fully utilized. KNORR, GYRE, CAPE HATTERAS, CAPE HENLOPEN AND WARFIELD project poor schedules (90-160 days/ship, and in some instances based on science projects not securely funded). Some partial lay ups among these ships appear inevitable unless more funded requirements appear.

In contrast, the FRED H. MOORE has a strong solidly funded schedule for the first time. CONRAD and ATLANTIS II have excessively high schedules.

West Coast Ship Schedules. Schedules for West Coast ships are somewhat stronger. Few duplicate bookings were advanced, and these few were known in advance and quickly resolved. A few additional adjustments were necessary during the meeting; they were made to accommodate all funded P.I.'s.

Both MOANA WAVE and ALPHA HELIX have heavy schedules that will be operationally taxing. The NEW HORIZON, WECOMA and POINT SUR have strong schedules. THOMPSON, SPROUL, and BARNES are viable. WASHINGTON and MELVILLE schedules are lighter than desired, but nevertheless can be

conducted efficiently. (e.g., without undue rise in daily rates). The non-availability of an icebreaker for Antarctic programs could have impact on MELVILLE's schedule in late 1987 and early 1988. OSPREY advanced no schedule; the ship conversion will continue.

In summary, excellent progress has been made in achieving a realistic UNOLS fleet schedule for 1987. In the summaries of 1986 and 1987 cost projections that follow:

Operation days have been reduced to a realistic level (although still above 1986 levels, and subject to further modest reduction).

October 1986 projection:	4,937 days
June 1986 projection:	5,756 days
Anticipated for 1986:	4,300 days.

Operations costs have been reduced dramatically from those advanced in June, 1986, although they are still higher than for 1986 operations.

	1987 Outlook <u>Oct., 1986</u>	<u>June, 1986</u>	1986
Costs			
NSF	\$29.75 M	\$35.0	(26.4)
Navy	5.4	3.6	(3.4)
Other	3.8	3.1	(4.4)
Total	38.9	41.6	(34.1)

Anticipated Funding:

	<u>1987</u>	<u>1986</u>
NSF	27.7	(25.0)
Navy	5.4	(3.4)
Other	3.8	(4.4)
Total	36.9	(32.8)

The \$27.7m optimistically anticipated from NSF includes recently-received increases in oceanographic facilities support together with about \$2.0m from the Ocean Drilling Program and the Division of Polar Programs. The Navy projection includes funds anticipated from all Navy sources, not just ONR. It, too, is optimistic.

These schedules and costs would result in a shortfall of \$2.0m. This is still significant, but reduced remarkably from the shortfall of \$9.7m projected at June, 1986 meetings. (It is also much less than the \$5.7m shortfall projected for 1986 operations in October, 1985.) Such a projected shortfall should be manageable. The NSF share of operating costs should be reducible through elimination from

schedules of some unfunded science projects and through negotiations to reduce individual operations proposals. The \$2.0 M shortfall represents about one Class I or II ship laid up for a full year, or two ships laid up for shorter periods. Alternatively, the \$2.0 M could be accommodated by laying up three or more smaller ships for 1/2 year or more.

SUMMARY OF 1987 COST PROJECTIONS
\$ Millions

	OP DAYS	COSTS			TOTAL
		NSF	ONR	OTHER	
OCTOBER, 1986 PROJECTIONS					
East	2633	15.173	3.480	2.506	21.159
West	2304	14.578	1.890	1.330	17.798
Total	4937	29.751	5.370	3.836	38.957
(Anticipated)	-	(27.7)	(5.37)	(3.84)	(36.9)
Projected Shortfall		2.0	-	-	2.0
JUNE, 1986 PROJECTIONS					
East	3211	18.532	2.469	1.473	22.473
West	2545	16.443	1.081	1.620	19.144
Total	5756	34.975	3.550	3.093	41.617
(Anticipated)		25.9	3.6	3.1	32.6
Projected Shortfall		9.1	-	-	9.1
MARCH, 1986 PROJECTIONS					
East	3203	18.474	2.927	1.677	23.078
West	2589	17.461	1.270	1.427	20.159
Total	5792	35.935	4.197	3.104	43.237
(Anticipated)		26.2	4.2	3.1	33.5
Projected Shortfall		9.7	-	-	9.7

PROFILES OF FUNDING CYCLES
\$Million

	OP DAYS	NSF	ONR	OTHER	TOTAL	SHORT FALL
1984	4816	23.1	4.0	7.0	34.6	-
1985	4769	25.9	4.1	5.8	35.8	-

1986 COST PROJECTIONS

	OP DAYS	NSF	ONR	OTHER	TOTAL	SHORT FALL
March 1985	5700	32.0	5.4	3.8	41.2	-
May 1985 Anticipated	5757	32.2 (26.0)	5.8 (4.2)	4.8 (3.8)	42.8 (34.6)	- (8.2)
October 1985 (Anticipated)	5310	31.2 (25.5)	4.8 (4.8)	5.8 (5.8)	41.8 (36.1)	- (5.7)
March 1986 (Anticipated)	4502	26.6 (25.0)	5.0 (5.0)	3.3 (3.3)	34.9 (33.3)	- (1.6)
June 1986 (Anticipated)	4370	26.4 (25.0)	4.3 (4.3)	3.3 (3.3)	33.8 (32.6)	- (1.2)
October 1986 (Anticipated)	4300	26.4 (25.0)	3.4 (3.4)	4.4 (4.4)	34.1 (32.8)	- (1.3)

Costs of Lay ups. Although it is not really a scheduling matter, the costs of lay ups and how to cope with those costs became the subject of urgent discussion. There was consensus that lay ups that result from scheduling decisions cannot be fully cost efficient. One way to avoid cost inefficiencies is to plan for lay ups to coincide with major overhauls or renovations. To date, advanced planning is not good enough to achieve such efficiency.

The Groups noted that ONR and NSF do not have agreement on how to fund lay up costs, especially in 1987. Scheduling Groups hope and urge that those agencies reach agreement concerning lay up costs.

Improving UNOLS Ship Scheduling. The need to improve UNOLS ship scheduling and some suggestions for improvements had been circulated to UNOLS members (letters from R.P. Dinsmore). The Ship Scheduling Groups discussed suggested improvements and other factors noted in member-reactions.

The Ship Scheduling Groups reached clear consensus on the following:

1. Regional and consortium scheduling meetings, at which scientific users can meet with ship schedulers are useful and should be used more extensively.
2. The February/March East/West scheduling meetings serve no useful purpose, and should be dispensed with. Instead, interchange of strawman schedules at this time should be done by mail/telemail.
3. Scheduling meetings concurrent with UNOLS meetings should be continued, with dates chosen to be shortly after results are known from NSF panel actions.
4. An interactive data bank, preferably using telemail for access, should be established under the auspices of UNOLS, to contain all ship requests, to include sufficient information to define P.I.'s preference and requirements, and to indicate status of proposal submission/funding.
5. The present decentralized system of scheduling, despite inefficiencies, is a better system than any centralized system we can envision. It should be retained and improved, not replaced.

There were some dissents, both to individual elements and the overall thrust of the Groups' consensus opinion.

Selection of Chairman. Bob Dinsmore, chairman of the East Coast Group called for election of a new chairman, and declined to stand for reelection. The East Coast Group selected Mike Rawson, L-DGO as their new chairman, effective for the 1988 cycle. Chairmen are now:

East Coast - Mike Rawson, Lamont
West Coast - George shor, Scripps.

AGENDA

East and West Coast Ship Scheduling Meetings
October 30, 1986

INDIVIDUAL MEETINGS

Individual meetings will concentrate on 1987 ship schedules, costs and recommendations if any. Assemble "regional fleet" schedules, cost data and unfilled 1987 Ship Time Requests (if any) for later coordination in JOINT MEETING.

1. Assemble institution inputs on 1986 ship schedules, operations and agency support. No review unless problems arise.
2. Review, discuss and summarize 1987 ship schedules, operations and costs, and agency support.

Update and Assemble 1987 ship schedule information. Update by ship 1987 Cost Projections. (See forms provided. Also, please provide the three estimates requested for various levels of operation in 1987).

3. Assemble any unfilled 1987 Ship Time Requests, compare to tentative schedules and adjust.
4. 1987 Schedules, Costs and Recommendations for Joint Meeting.
5. Combine East and West Coast Information for 1986 without review.
6. Combine and adjust East and West Coast Ship Schedules, operating cost and agency support information for 1987. Assemble unfilled 1986 Ship Time Requests. Produce workable fleet schedule that fills all funded ship time requirements within funding anticipated.

This will also lead to formulation of any group recommendations for 1987 ship operations.

7. The remainder of the meeting will be in development of a more useful, effective process for UNOLS Ship Scheduling. Starting point for discussions and group action will be suggestions made by Chairmen Dinsmore and Shor (see Dinsmore letters, Sept 4, 86), responses and input from UNOLS members.
8. Recommendations for UNOLS



1986 ESTIMATES

DATE 30 October 1986

	1985 OP DAYS	1985 COSTS	OPS DAYS	NSF \$K	1986		TOTAL \$K
					ONR \$K	OTHER \$K	
ATLANTIS II	287	3,226	219	1,607	446	905	2,958
KNORR	185	2,423	163	963	1,075	0	2,038
CONRAD	359	3,264	292	2,839	353	108	3,300
OCEANUS	223	1,515	218	780	546	91	1,417
ENDEAVOR	240	1,679	235	1,449	203	NUSC 53	1,705
GYRE	259	1,850	300	1,200	0	600	1,800
ISELIN	LAI UP	619	177	1,587	18	0	1,605
CAPE HENLOPEN	159	731	151	534	64	142	740
CAPE HATTERAS	245	1,396	225	1,080	0	MMS 156 STATE 58 214	1,294
CAPE FLORIDA RSMAS PORTION	218	944	33	214	0	0	214
WARFIELD	132	506	125	571	0	0	571
BLUE FIN	130	203	136	80	0	DOE 95	175
LAURENTIAN	24	163	70	177	0	17	194
CALANUS	148	227	147	248	30	0	278
MOORE	44	471	18	0	0	290	290
TOTAL	2,653	19,217	2,509	13,329	2,735	2,515	18,579

1986 ESTIMATES

	1985 OP DAYS	1985 COSTS	OPS DAYS	NSF \$K	1986		TOTAL \$K
					ONR \$K	OTHER \$K	
MELVILLE	271	2,988	241	2,361	108	UC 131 Oth. 148	2,748
WASHINGTON	241	2,608	200	2,275	12	UC 47	2,333
NEW HORIZON	195	1,479	236	1,057	113	DOE 163 UC 333	1,666
ROBT. G. SPROUL	128	562	149	437	102	DOE 28 UC 20	587
VELERO IV/OSPREY	85	383	0	250		125	375
POINT SUR CAYUSE/LAY UP & TRANSFER	111	450	135	259	50	CNOC 347 OTH 88	744
				147		CNOC 40	187
WECOMA	213	1,666	0	867	0	0	867
THOMPSON	271	2,600	248	2,124	326	0	2,450
BARNES	150	206	135	187	0	19	206
ALPHA HELIX	153	1,497	188	1,484	0	186 days Alaska 2 days 14	1,331 *(1)
MOANA WAVE	310	2,168	259	1,620	0	378	1,998
WEST TOTAL	2,128	16,607	1,791	13,068	711	1,881	15,492 *(1)
EAST	2,653	19,217	2,509	13,329	2,735	2,515	18,579
TOTAL	4,781	35,824	4,300	26,397	3,446	4,396	34,071 *

*(1) Approximately 170 K carry over.

1987 COST PROJECTIONS

	PROJECTED 1987 COSTS							
	1986 COSTS NSF	1986 COSTS	1986 OP DAYS	1987 OP DAYS	NSF	NAVY	OTHER	TOTAL
ATLANTIS II	1,607	2,958	219	305	2,841	169	NOAA 390	3,400
KNORR	963	2,038	163	162	1,907	554	USGS 31	2,492
CONRAD	2,839	3,300	292	350	2,163	1,133	TBA 309	3,605
OCEANUS	780	1,417	218	236	1,188	586	0	1,774
ENDEAVOR	1,449	1,705	235	216	897	532	TBA 233	1,662
GYRE	1,200	1,800	300	103	754*	183**	STATE 400	1,337
ISELIN	1,587	1,605	177	205	1,269	201	DOE 252	1,722
CAPE FLORIDA (RSMAS)	214	214	33				STATE **	
CAPE HENLOPEN	534	740	151	72	260	100	360	720
CAPE HATTERAS	1,080	1,294	225	157	921	0	DOE 153 STATE 73	1,147
WARFIELD	571	571	125	89	409	0	0	409
BLUE FIN	80	175	136	190	90	0	DOE 100	190
LAURENTIAN	177	194	70	60	168	0	NOAA 85	253
CALANUS	248	278	147	206	333	22	0	355
MOORE	0	290	18	282	1,973	0	STATE 74 INDUS. 46	2,093
TOTAL	13,329	18,579	2,509	2,633	15,173	3,480	2,506	21,159

* Incl. 154 '86 Carry over.

** Lay up costs.

2. Adjusted for schedule changes made 10/30/86.

3. 1986 cost of RSMAS only.

1987 ESTIMATES

	PROJECTED 1987 COSTS							
	1986 COSTS NSF	1986 COSTS	1986 OP DAYS	1987 OP DAYS	NSF	NAVY	OTHER	TOTAL
MELVILLE	2,361	2,748	241	212	2,414	132	0	2,546
*1. WASHINGTON	2,275	2,333	200	230	2,237	405	UC 95	2,737
*1. NEW HORIZON	1,057	1,666	236	263	1,099	175	DOE 189 UC 297 NASA 14	1,774
*1. ROBT. G. SPROUL	437	587	149	172	430	65	DOE 30 UC 130	655
OSPREY	250	375	0	0	Lay up 400	0	0	400 *
*1. POINT SUR *2. CAYUSE	259 147	744 187	135 0	236	736	CNOC 359 ONR 54	Oth. 124	1,273
WECOMA	867	867	0	255	1,261	396	0	1,657
THOMPSON	2,124	2,450	248	240	2,472	0	0	2,472
BARNES	187	206	135	145	195	0	20	215
ALPHA HELIX	1,484	1,331	188	219	1,535	0	14	1,549
MOANA WAVE	1,620	1,998	259	332	1,799	304	AID 396 HIG 21	2,520
TOTAL	13,068	15,492	1,791	2,304	14,578	1,890	1,330	17,798
EAST COAST	13,329	18,579	2,509	2,633	15,173	3,480	2,506	21,159
FLEET TOTAL	26,397	34,071	4,300	4,937	29,751	5,370	3,836	38,957

*1. Adjusted for schedule changes 10/30/86.

*2. CAYUSE Lay up (and C.F.-P.S. transfer).

