2000 Utilization

		Class	Updated	NSF	Navy	NAVO	NOAA	Inst	Other	Total	Funded	% Funded
Atlantis	WHOI	1	09/02/1999	262			19		22	303	227	75%
Ewing	LDEO	1	08/29/1999	253					7	260	253	97%
Knorr	WHOI	1	09/02/1999	265	57					322	170	53%
Melville	SIO	1	09/06/1999	244			18	4		266	221	83%
Revelle	SIO	1	08/31/1999	206	107					313	304	97%
Thompson	UW	1	08/22/1999	81	20	50	10	66	28	255	169	66%
Endeavor	URI	3	08/30/1999	98	85	20	26			229	164	72%
Gyre	TAMU	3	09/02/1999	10	55			14	67	146	79	54%
Horizon	SIO	3	09/02/1999	54		30	23	38		145	92	63%
Johnson	HBOI	3	09/07/1999	168	4		86		1	259	172	66%
Link	HBOI	3	09/07/1999	53	72				45	170	124	73%
Oceanus	WHOI	3	09/06/1999	110	91		6		5	212	136	64%
Wecoma	OSU	3	09/12/1999	140	21		39			200	192	96%
Alpha Helix	U of Alaska	4	09/02/1999	95	0	0	21	1	29	146	78	53%
Hatteras	Duke	4	08/05/1999	103	17	30	31	10	9	200	83	42%
Henlopen	U of Del	4	08/26/1999	147	37				4	188	174	93%
Pt Sur	MLML	4	09/12/1999	42	56			15	54	167	90	54%
Sproul	SIO	4	08/30/1999	49	33			12	15	109	77	71%
Weatherbird	BBS	4	08/22/1999	130						130	130	100%
Barnes	UW	5	09/07/1999	36	5		10	13	10	74	32	43%
Blue Fin	Skidaway	5	09/07/1999	79	8		25		5	117	91	78%
Calanus	Miami	5	09/02/1999	45	26	35	61	6		173	136	79%
Laurentian	U. Mich	5	07/06/1999	232						232	232	100%
Longhorn	U of T	5	09/06/1999	20		30		28		78	78	100%
Pelican	LUMCON	5	09/02/1999	80	21	60	50	2	27	240	122	51%
Sea Diver	HBOI	5	09/07/1999	26	62					88	88	100%
Uracca	STRI	5	09/02/1999	15				105		120	15	13%
Totals				3043	777	255	425	314	328	5142	3729	73%
% of Total				59%	15%	5%	8%	6%	6%			
							Navy Total					

Chart Ship Costs 1999 vs 2000

Appendix 5

Report from the UNOLS Arctic Icebreaker Coordinating Committee to the UNOLS Annual Meeting - September 1999

The UNOLS Arctic Icebreaker Coordinating Committee (AICC) provides scientific oversight of Arctic marine science support on US vessels, with primary focus on USCGC Polar Star, USCGC Polar Sea, and the new USCGC HEALY. In the past year the AICC held meetings 18-20 November 1998 at NSF headquarters in Arlington, VA, and 24-25 March 1999 in New Orleans. Interim business has been handled via a lively email correspondence, and AICC representatives have attended other meetings related to AICC business.

Although the history of the AICC's interactions with the Coast Guard is not long, the principal accomplishment of the AICC is the much-improved dialogue with the Coast Guard regarding icebreaker construction and support of Arctic marine science. This close working relationship is immediately obvious to anyone attending an AICC/Coast Guard function. The Coast Guard deserves a large measure of credit, and the AICC has noted to the Coast Guard especially that the appointment and retention of excellent leaders such as Capt. Johnson (head of HEALY construction oversight), Capt. Garrett (first Commanding Officer of the HEALY), and Comdr. Dupree (Chief of Icebreaker operations) is exactly the type of move that has brought about this relationship. The AICC has urged the Coast Guard to continue placing such capable, "science friendly" officers in positions of responsibility at sea and ashore in the icebreaker program.

The AICC has asked the Coast Guard to model its relationships with user-scientists upon those carried out by UNOLS large ship operators. The AICC has been discussing with the Coast Guard various means to help ensure close ties with the UNOLS technical and scientific communities. Discussions continue in a positive atmosphere, though without a specific plan or proposal as yet. The AICC notes as a positive step that Coast Guard Marine Science Technicians now participate on short UNOLS cruises as part of their training.

HEALY delivery has been delayed until late 1999, mostly due to the complexity of the vessel, its "first of type" status, and a severe shortage of skilled shipyard labor in Louisiana. There have been no reports to the AICC of the sort of major problems that might bring construction or testing to a halt. The delays are, however, causing a rescheduling of the post delivery trials. Reports received from the HEALY construction team indicate that USCGC HEALY is now in the midst of builder's trials, including running in the Gulf of Mexico near the Mississippi delta. Both successes and problems have been noted in these reports, which have generally had a positive tone. An updated evaluation of status is expected by late October. The AICC has noted the potential for problems with the Healy's science winch systems, low overhead clearance in the main lab, blockages for moving large objects on the main deck to and from the science hoist, and need for additional science network connections and cable ports, among other items. The Coast Guard has begun work in making or scheduling most of the needed modifications, and is keeping an eye open to the potential problem areas.

The Coast Guard's warm water trials should take place ca. January/February 2000, after which the ship will likely make a public relations visit to Baltimore. The AICC plans to assist by providing posters for labs and persons to explain Arctic research projects. The ship will conduct ice trials in the eastern Arctic in winter/spring 2000 and will not transit to its homeport (Seattle) until after completion of both ice and science trials. Present plans call for the Healy's availability for agency-funded Arctic marine science support - the vessel's primary mission - beginning spring 2001. HEALY crew training is well underway. Crew familiarization of the ship is receiving a high priority.

John Freitag (UNOLS RVTEC) continues to coordinate the oceanographic community's participation in the Healy's science systems testing and has kept the AICC up to date. The basic outline of this program includes: (a) Warm water Phase I testing of SeaBeam, ADCP, data network, CTD, Bathy 2000, coring and winch systems and hull and machinery acoustic noise tests; (b) Transit Phase II includes little or no science system testing; (c) Level Ice trial, Phase III is almost exclusively a programmed sequence of ice breaking, with little science systems testing per se except for bathymetry and the data network, though teachers and or wildlife observers might be appropriate for his phase; (d) Science Systems Testing, Phase IV consists of four, one week legs moving to progressively more intense and complex tests of all major science systems in a high arctic environment, and may also include teachers. AICC members will be at sea on the vessel during the test cruises. The AICC will develop a process by which test evaluation reports are developed and routed through the system and see to the release of public data after the science systems testing program.

The outlook is positive for NSF's Arctic marine science programs, including both that HEALY funding will not eat into traditional ocean science funding at NSF and that OPP Arctic science funding looks healthy. The deadline for OPP Arctic proposals will be the same as for other ocean science programs at NSF. NSF agrees that expeditionary planning will be important for developing cohesive programs. The Arctic Section is working on the question of how to handle equipment upgrades and new equipment needs and has hired an Arctic Research Support and Logistic Manager. It is possible that OPP may adopt practices similar to those in Ocean Sciences, where technical support is shifting over from the research budgets to the technician support budgets.

Regarding proposal submissions, NSF has confirmed that ship costs for use of HEALY need not be explicitly contained in NSF proposal budgets, so long as ship use requirements are clear in accompanying documentation, (for example the "831" form or NSF/OPP's coming logistical support form for Arctic research). A ship-time request form is available from http://gso.uri.edu/unols/unols.html.

The AICC is encouraged by recent Coast Guard attitudes about and conduct of its icebreaker Arctic marine science support. Considering (1) that the AICC's stated goal is that science users of the Coast Guard icebreakers be provided an overall cruise support experience similar to that provided by the large UNOLS operators, (2) that very high personnel turnover rates are normal to the Coast Guard [the Coast Guard is looking into this and taking some action in the icebreaker program], and (3) that a large measure of UNOLS' success rests upon the experience and expertise of the officers, crew, technicians, and support personnel, the clear challenge ahead for the AICC will be to bring together these elements successfully and with the continued enthusiasm and participation of all parties.

The AICC has been modeled after UNOLS DESSC ('the ALVIN committee') for expeditionary planning. The Committee's responsibility is to pull together a critical mass to give direction for scientists in writing proposals but in no way be meant to influence agency funding decisions. To advance expeditionary planning and to keep the community at large informed the AICC plans to continue its involvement with the UNOLS booth at AGU and will conduct a town meeting at the AGU Fall meetings. Participation in some form will also be necessary at ASLO in San Antonio and at the NSF OAII meeting in October. A primary goal of this process will be to prepare and update a 5-year "rolling" plan for Arctic marine science use of the Coast Guard icebreakers.

A community census in late 1998 uncovered strong interest from potential science users. With the first HEALY support for the Western Arctic Shelf-Basin Interactions project in 2002, the AICC has advised NSF, the Coast Guard, and the community that assessment of scientific interest in use of HEALY during 2001, based upon that census, indicates a likelihood of work in the eastern Arctic, for example including the Nansen-Gakkel Ridge, during mid-late summer 2001. Additional marine science programs in the western or eastern Arctic are also logistically feasible earlier that year.

The Coast Guard plans to continue alternating the polar class ships with six months of a year in the yard and a year operating. The Coast Guard's mission for breaking into Thule remains. Presently the Canadians have been picking up the mission but this may not always be possible.

The AICC completed its 1999 Science of Opportunity (SOO) review and reported to the Coast Guard and scientists. The cruise was cancelled, however, due to vessel availability issues. The 2000 SOO cruise announcement is due to be published in September 1999. The AICC is charged with assessing SOO proposals for logistic and overall compatibility with the SOO mission. No decisions are made by the AICC with regard to participation, and AICC comments are specifically not to be used to leverage agency support for any proposal. The AICC continues to caution the community that science support is not necessarily the chief mission of SOO cruises, and the AICC reminds all that the Coast Guard will continue to accept ship-time requests for funded Arctic science missions on the Polar-class vessels and the HEALY.

The AICC has been briefed by Dr. Bernie Coakley of Tulane University regarding his recent experience with Arctic bathymetric and sub-bottom surveys. In ice-covered waters it is most effective to use a submarine. With heavy emphasis on central Arctic marine geology and geophysics expected for future HEALY proposals, joint submarine/HEALY ventures could provide a substantial science benefit. NSF has funded a study to develop capital and operating costs for a SSN operating for science. A steering committee has met to provide the contractor, Rand Corporation, study direction. At least two AICC members are on this steering committee.

The next AICC meeting will probably be held in January 2000, most likely at NSF.

The AICC can be reached by writing to the Chair (jswift@ucsd.edu) or to the UNOLS Office (unols@gsosun1.gso.uri.edu).

Appendix XIII

Proposed UNOLS Charter Revisions

3. Membership

a. Membership in UNOLS is open to those institutions which use, or operate and use, sea-going facilities and maintain an academic program in marine science~~. Membership shall be by institution~~. It is intended that UNOLS institutions make substantial contributions to the national oceanographic program. Both individual institutions and consortia of such institutions may be members of UNOLS for purposes of attending UNOLS meetings, receiving