

Arctic Icebreaker Coordinating Committee (AICC)

Minutes of the meeting held on board

USCGC HEALY at Seattle, Washington

August 22 and 23, 2000

Appendices

1. [Agenda](#)
2. [List of Attendees](#)
3. [Ship Time Request Forms](#)

General business & reports.

0835 The Arctic Icebreaker Coordinating Committee (AICC) meeting was called to order and welcoming remarks were made by Jim Swift, AICC chair. Jim covered logistics and the plan for the meeting that was held in the science conference room onboard USCGC HEALY. The agenda for the meeting is included as [Appendix I](#). The agenda is a general outline of the subjects to be covered and these minutes are structured according to topic rather than being strictly chronological. Jim also reviewed major events since the last AICC meeting which included the warm water testing, visit to Baltimore, icebreaking trials, cold water science testing and the transit of the Northwest Passage by HEALY enroute to their new homeport in Seattle, culminated by yesterday's Commissioning ceremony.

Captain Jeffrey M. Garrett, USCG, Commanding Officer of HEALY welcomed the committee and guests to the meeting and HEALY. Introductions around the room were made and a list of attendees is included as [Appendix II](#)

NSF Report: Tom Pyle/NSF presented NSF Arctic Service Awards to all of the AICC members. Discussion of the NSF budget and scheduling issues were deferred until after lunch.

UNOLS report: Mike Prince reported on the establishment of the new office. Jack Bash will continue support for AICC through next April. UNOLS issues of interest include the orderly replacement of the academic fleet and an initiative to improve the quality of service within the academic fleet. AICC efforts fit within the UNOLS role of quality improvement program. Also discussed, was the progress of the University of Alaska science mission requirements (SMR's) for a vessel to replace the ALPHA HELIX. AICC would like to keep track of the development of this ice hardened 200-foot vessel and asked the UNOLS office to keep them informed of University of Alaska activities. AICC will probably have a role in the oversight of this vessel.

ARVOC report: There was no one representing the Antarctic Research Vessel Operator's Committee at the meeting. Jim Swift reported that he would be attending their upcoming meeting in New Orleans. This committee is now sponsored by Raytheon Polar Operations, the new contractor for support of Antarctic Science operations. Jim will give a report after the meeting by email. There is a subcontract with WHOI to provide technical support but there has been very little contact with the contractor to date. There was a question about the PALMER contract renewal, but no one present knew what is happening.

NSF Inspection of Icebreakers: Jack discussed the possibility that the NSF inspection team would look at the PALMER and this led to a discussion of the possibility that the inspection team might look at HEALY and the POLAR class vessels in the area of oceanographic equipment and procedures. Capt. Garrett made the point that if this was instituted that it should be done under the auspices of the AICC and that the report be filtered through the AICC. There was some concern that the regular inspectors may not be Arctic oriented. One recommendation was that AICC members and NSF program managers should probably accompany these inspections. Both Captain Garrett and Captain Keith Johnson (POLAR SEA) thought that it would be very useful to have a periodic evaluation of science capabilities conducted by a

group that was looking at the entire academic fleet. There currently is no contract for an inspection team. When the contract is let, however, adding the Coast Guard Icebreakers should be considered.

U.S. Coast Guard Icebreaker Operations (Headquarters) report: CDR George Dupree, USCG Headquarters asked that a demonstration of the NOAA underway data system and discussion of its use on board HEALY be added to the agenda. He also discussed the Coast Guard budget. They are under pressure from OMB to change the reimbursement rate for HEALY so that more costs will be reimbursed and in turn additional money will be added to the NSF budget to pay that added cost. NSF has submitted a written response indicating that they are not in favor of this plan. NSF is not interested in obtaining any of the Coast Guard's budget or operational control of the HEALY and for the time being it appears the reimbursement rate will remain as it is.

Coast Guard PacArea report: LT April Brown, USCG reported for the Coast Guard's Pacific Area (PAC AREA). She is new to the job and will be the point of contact for USCG icebreakers. They have added Dave Forcucci to the science staff and he is designated for HEALY science support. Dave previously worked for NOAA doing biological oceanography. They will be working to make this a permanent billet in icebreaker operations.

AICC contact with the Coast Guard should be through all the major players, CDR George Dupree (USCG HQ), LT April Brown (PACAREA), Captain Jeffrey Garrett (HEALY), Captain Keith Johnson (POLAR SEA) and Captain Terrence C. Julich (POLAR STAR)

The 2000 Science of Opportunity cruise currently taking place on the POLAR STAR is going well. Glen Cota (AICC member) is the chief scientist and will provide a full report after the cruise.

The AICC was invited and took the opportunity to view the science spaces on POLAR SEA later in the meeting. The tour highlighted the many upgrades for science that have been made and are planned for the future. The "world's most powerful, non nuclear icebreakers" are still excellent platforms for Arctic science operations. With the additional focus on training, equipment and systems upgrades that operating the HEALY will bring to the Coast Guard, it was felt that there would be increased demand to effectively utilize the POLAR SEA and POLAR STAR given adequate funding.

HEALY Test Program

Test Memos and Reports on HEALY Science testing: Bob Parsons gave a report on the test memos. Everybody that participated in the testing program used them and everyone provided a completed test memo report in one form or another. The test memos have all been collected by Coastal Systems and have been reviewed. They extracted all comments that had monetary implications. A list was prepared and submitted to NAVSEA. They were organized as 28 "must do" and 29 "nice to have" items. There will be more meetings and a final report is due in February, which AICC should review. Planning information for what needs to be done within the existing budgets has been reported to NAVSEA. Capt. Garrett has also put together a list of PSA items and other changes that will be done in the next year and he will distribute this to AICC in the next couple of weeks. Some items will be covered as warranty items and the others will be done as Coast Guard items.

There was a follow on discussion regarding some of the data that was collected during the trials, which have been determined to be of value beyond the testing purposes. These include bottom-mapping data from Orphan Knoll that is of interest to Canadian scientists at Bedford Institute. This data was forwarded to George Dupree who will send to the appropriate people. Also the cores, which are archived at Oregon State University (OSU) are of interest to some members of the science community. Jim will report to the State Department regarding any cores or other data that were taken under his research permits. The MOCNESS net tow data provided to Sharon Smith should be made available to other interested parties.

Jim Swift has been accumulating reports from the science test personnel and will put together an AICC/UNOLS report which the committee will review. This was discussed in greater detail later in the

morning (see below).

Ship modifications underway or planned before 2001 science season.

Healy PSA II.

Captain Garrett reported on the plans to correct problems and make improvements before the beginning of science operations next year. There are three contractual arrangements for work on the HEALY during the next few months.

1. Post Shakedown Availability (PSAII) work was competitively awarded to Todd Shipyard in Seattle.
2. Warranty items with Avondale Shipyard include approximately 300 items. Todd Shipyard was selected as the sub-contractor by Avondale.
3. A dry-docking that Avondale owes the government as part of the original contract and again Todd Shipyard has been selected as the contractor.

This allows Todd Shipyard to take care of all items. The ship will be moved to Todd Shipyard on September 11th and it will be there until December when it is hoped all items will be completed.

PSAII items

1. Add three 2-person berths in some empty space on the O3 level to give more berthing flexibility but not necessarily to increase science-berthing capacity.
2. Remodel and upgrade all lounges and the science conference room with carpet, partitions, additional seating, workstations, and more flexibility.
3. Engineering items for monitoring and fire suppression system.
4. Get rid of science communications space and open it into the computer lab.
5. Change watertight doors on upper level ladderways and add access to weather from fourth deck.
6. Additional engineering items including cameras.
7. Expand meteorology lab on bridge
8. Small boat replacements for all icebreakers, including one with a deckhouse configured as an Arctic survey boat.
9. All warranty items.

The WAGB, small boat replacements will be built by Munson. There will be one Arctic survey boat to share between the vessels. The others will be open cargo style boats. Each icebreaker will probably only carry one at a time based on the needs of the science program.

An additional list of projects generated from the tests is to be tackled with the maintenance budget.

The biggest item in that list is the winch control system. Alstom, the contractor for the engine controls, is looking at a simpler joystick system to replace the complicated computer control system currently installed. If there is not enough time or money to get it done through Alstom, the crew is prepared to install a simpler winch control system themselves.

Captain Garrett has put a spreadsheet together that tracks all projects from the trivial to the major so that nothing falls through the cracks. In general, in the next few months they will be making sure that the NAVSEA money and warranty items are all taken care of. In the future, the NSF proposal cycle for equipment may be utilized to upgrade equipment on HEALY.

The Coast Guard has been using the draft reports and briefings from the science test groups to generate a list of projects prior to receiving the official reports. They will review final reports to make sure that they have not overlooked anything. The AICC will have a continuing role in commenting on planned ship

modifications, adding to the list, prioritizing the list, and/or assessing the suitability of completed modifications. Captain Garrett plans to share this list with AICC after reviewing it over the next couple of weeks.

Completion of the AICC report on the Healy science systems test program.

There needs to be a complete synopsis of the testing program. The AICC would like to make sure that we use the lessons learned on how to use the systems on board in the cruise planning manual and as part of the information passed on to users in the future.

The testing reports should be completed in the near future so that the information in them can be passed on to 2001 users in a timely manner. Jim Swift has assembled a good first draft. He plans to take any comments and further refine the report before circulating it again to AICC and other interested parties. The individual reports will either be added as annexes and/or they will be included as part of the test memo reports. The AICC report will be structured as a chief scientist's report that gives an overview of what happened, makes recommendations, and outlines lessons learned. It was also recommended that videos be preserved and converted into training videos. Jack could use some of the carryover testing program money on training videos. We will need to identify someone to do the editing of existing videos that is somewhat familiar with the material and can do it economically. Personnel and facilities at an institution such as OSU where a member of AICC is located should be considered. Jack also discussed how his carryover money could be used to bring technicians and scientists on board for follow on testing after the PSAII work is completed. Using the same people for follow on testing trips to look over corrections and changes will be the most efficient way to retest and would be contractually easier to do.

Much of the discussion centered around documenting and recording the lessons learned and instructions on how to do various activities as one of the products of the testing program. This includes videos and web pages. Captain Garrett and Jack will begin the action, putting together the follow on test programs and video editing. Local testing cruises will take place in the January to March time frame. The Coast Guard will need to inform UNOLS and Jack as soon as possible about the planned schedule in order to make the appropriate test personnel available.

Jim Swift will take on as an action item, the creation of a revised draft of the AICC testing program report and will then circulate to AICC. Comments should then be sent to the UNOLS office to be incorporated in the next iteration after mid September. It was emphasized that this report serves two purposes: to document the testing process and results, and to provide useful information to future users about how to get the most from the systems on board HEALY.

Status of science planning documentation ("HEALY Cruise Planning Guide").

George Dupree will distribute the draft of the cruise-planning document in the next few weeks. As discussed above, it was recommended that there be an online cruise planning document for each of the Coast Guard icebreakers and that they include links and references to training information and instructions for use of onboard systems both online in the onboard network, and in hard copy. The Coast Guard, AICC and the UNOLS office will work together to ensure that the planning and instructional documentation is accurate and accessible to all users.

Arctic icebreaker scheduling and planning for 2001 and 2002.

NSF report: Simon Stephenson, NSF, reported on the tentative 2001 schedule of funded science for HEALY and the POLAR class icebreakers. Currently two projects are planned for HEALY resulting in the following tentative schedule for a total of 93 NSF funded science days. There is a potential window for one additional project and transit time will have to be added to the schedule.

CRUISE MAP INDEX/AREA/ P.I./INSTITUTION/ STATUS/DAYS/AGENCY/
DATES PURPOSE PROPOSAL NO. PORTS CLEARANCE

29 JUL AR1,AR2,AR3,AR4/Gakkel [Michael P.](#)/ Tromso 63/NSF/F
30 SEP Ridge/Geology U Tulsa/OPP/ANS Tromso

07 OCT AR2,AR3/Arctic/ [Bellingham, J](#)/MBAR Svalbard 30/NSF/F
04 NOV AUV I/NSF/OPP 99-10290 Svalbard Norway, Russia

Programs that may go on other ships such as POLARSTERN or POLAR class icebreakers were also discussed. As an example the Grebmeier cruise in the Bering Sea may be scheduled on the POLAR STAR in the March/April 2001 time frame. A program involving a mooring at the North Pole for Jamie Morison (UW/APL) and others will likely be accomplished by aircraft.

In 2002 the work for Keigwin in the Bering and Chukchi Sea is funded and along with SBI cruises will make that a western Arctic year. Going back to the eastern Arctic in 2003 will make the concept of alternating schedules between the western and eastern Arctic a reality.

A decision regarding whether or not a third program can fit into the HEALY schedule may not be made for one or two months. There was some discussion about the difficulty of planning for operations when funding and scheduling decisions are made so late in the year. Polar Programs has publicly stated that proposals for projects using ships in the following year should be submitted for the February deadline similar to the Ocean Sciences protocol. This is not yet a hard and fast rule and some programs submitted at a later date may still be funded for ship time.

One of the programs for next year (Michaels) is a two-ship operation with POLARSTERN and it was stressed that careful planning by Chief Scientists, Captains and funding agencies is needed to ensure successful cooperation takes place. There is a meeting in Bremerhaven in September and it was suggested that the Coast Guard and possibly NSF have a representative attend this meeting if travel funding is available.

Identification of 2001 (& 2002) Arctic icebreaker technical support requirements.

Given that the [Michael](#) and [Bellingham](#) cruises are the first two scheduled and that the potential third cruise may be unknown for two or three months, Captain Garrett will contact the first two PI's right away. He will discuss their needs and clarify the need for some of the requested equipment that is not necessarily available from the Coast Guard on the HEALY. See UNOLS Ship Time Request Form(s) attached as **Appendix III**. Captain Garrett will email a report of what might be needed to AICC and program managers to help in the evaluation of the need for additional technical support. He will also encourage the PI's to come to Seattle for a pre-cruise planning visit. NSF is willing to pay for these visits if necessary. There was some discussion about what the PI's had asked for, what support they might need and who would provide it. In the end it was decided that the first step was for the Coast Guard to contact the PI's and get the answers to these questions.

Discussions regarding the need for technical services and equipment beyond what the Coast Guard has available and what the PI will provide took place several times during the meeting and carried over to the second day during which the following discussion and conclusions took place.

Technical support for Coast Guard icebreaker science will be provided through some mechanism that has not yet been fully determined. The Coast Guard will need to identify with input from AICC what technical support is needed for the Coast Guard. The UNOLS office will coordinate with the Coast Guard to determine what the technical services and equipment requirements are for the next year. The office will also receive specific recommendations from the AICC regarding areas that need technical support such as SeaBeam and satellite imagery. The text of what is needed to support next year's projects will be circulated to AICC for their comment and this will be sent to Simon at NSF. The office will contact the

other UNOLS technical groups that are interested in providing this support to include them if required. A proposal will be prepared by the UNOLS office for submission to either OPP or Sandy Shor in OCE.

Defining the AICC role in the Coast Guard's cruise scheduling process.

Because the AICC members are all potential proposers of programs that might use HEALY, they cannot be involved in the scheduling process. The UNOLS office will work with the Coast Guard, NSF and other funding agencies to make sure that scheduling concerns of all are addressed and to serve as an intermediary for specific questions to be put to the AICC. The AICC could be part of the network of advisory contacts for people preparing proposals to use HEALY and POLARs.

For Science of Opportunity (SOO) cruises the AICC has a role in ensuring that projects are compatible and that they are logistically possible from the vessel being used. Pre-cruise planning procedures for SOO cruises are vital to the success for those cruises. The initial selection of participants takes place with consultation between Coast Guard Pacific Area and AICC. Once the Chief Scientist has been identified, the planning for these cruises should be handed off to the Chief Scientist and the Captain of the icebreaker with Pacific Area kept in the loop to facilitate the coordination.

Long-term Arctic science and logistics planning

SCICEX update (present and future plans; relationship with icebreaker work).

Navy support of Science operations from submarines was reported by Paul Bienhoff of Johns Hopkins University/Applied Physics Lab (JHU/APL). Not all submarines are designed to do under ice operations. Newer Los Angeles class submarines are hardened for ice operations but they are in high demand for other operations. The Navy has verbally agreed to consider a proposal to do science with a submarine. There are three types of cruises; science of opportunity cruises similar to those on icebreakers, accommodation cruises (where the instrumentation is taken and data are collected without the scientific party on board) and dedicated science cruises with a science party embarked. The likelihood of the third type happening is very slim. The available ships are the earlier LA class that are not ice hardened and can operate only within 100 miles of the ice edge. It is possible that Navy submarines could be used for "accommodation cruises." Keeping a ship in service for science-only ops is a dead issue with the decommissioning of Mendel Rivers. SCICEX data (unclassified) is available from Johns Hopkins University. In summary, there will be submarine science done in the future, once every two or three years probably as science of opportunity or accommodation cruises. The Mendell Rivers will do an accommodation cruise enroute to Bremerton for deactivation this year.

Overview of Arctic icebreaker user ideas to date. PDF file of user ideas on the web.

User ideas for the Arctic are posted on the web in a pdf file at: <http://archive.unols.org/committees/aicc/healyuse.pdf> This information has not been updated since January. We will need to make sure that user ideas are emailed to the UNOLS office and posted to this spreadsheet of ideas, sorted by year and area of operation so that it will be useful. Ship time requests can be added to this table as well. A simple method for looking at ship time requests for the Arctic is to use the geographic display of ship time requests at: <http://www.gso.uri.edu/sst/sst.html>

2001 Science of Opportunity Cruise.

Science of Opportunities cruises on POLAR SEA may be possible on the return voyage

from Deep Freeze in the summer of 2001. Jim Swift will send a draft announcement for SOO 2001 to April Brown, George Dupree and Simon Stephenson to set the date and update it before it goes out.

Other business

Science Data Network:

CDR Johnson, Commanding Officer of the electronics/computer support facility was introduced, and outlined what his unit does in support of the icebreakers. He is responsible for the Science Data Network (SDN) on the HEALY and will be putting the same system on the POLAR class vessels. The Coast Guard is going to sign an MOU with NOAA to use their software. The preliminary feedback indicates that the NOAA Scientific Computer System (SCS) software is easier to use and configure and will probably provide solutions for all the problems with the existing SDN system and will most likely replace it. RVTEC is setting up a user group for SCS and will take a look at it during their upcoming meeting. Kelly Falkner will coordinate with CDR Johnson to be sure that the list of concerns with the original SDN is addressed by the SCS and that these solutions are tested.

The email system was discussed as well. The cost of email is in the hundreds of thousands of dollars with the current communications links (IMARSAT) and coverage may be a problem at higher latitudes. An M4 Satellite system is being developed that will provide continuous T1 type connection where charges are based on the number of data packets transmitted. This system may provide better continuous coverage and might do so at a better cost. There was some discussion about the other possible systems. This is another area of responsibility for CDR Johnson and his group.

The AICC went to the science computer lab to see the NOAA SCS in action. From cursory examination and from user reports it seemed to everyone present to be a much better system than the existing SDN.

Fall AGU icebreaker planning meeting - The UNOLS office should arrange a meeting room at AGU for an AICC town hall meeting after determining from AICC what the best date for a meeting would be. This meeting will give potential users of Coast Guard icebreakers a chance to learn from AICC, Coast Guard and NSF representatives first hand about the testing program, capabilities and plans for CG Icebreaker support of Arctic Science in the future.

Status of Healy transits and science ops in Canadian open and ice-covered waters (CASPPR)

Captain Garrett gave a summary of the issue from the Coast Guard's point of view. Entry into Canadian ice covered waters under CASPPR allows for exceptions and entry outside the classification guidelines, which for Healy would require certain fuel tanks to be empty and to have an ice pilot on board. This is not impossible but could produce an endurance problem. Another option would be to upgrade the ice classification of HEALY based on actual trials or get permission to eliminate the requirement to have the fuel tanks on the skin empty. In moving towards a relaxing of the CASPPR requirements for the HEALY, the Coast Guard would emphasize the benefit to the Canadian science community. Any requests by the Coast Guard will be geared towards finding a long-term solution to the problem.

Response to NSF regarding the TEAA (teacher) program. Kelly Falkner and Jim Swift will write a letter to NSF regarding the benefits of the TEAA program participation in the Science Trials and ask for input from AICC. Participation by the teachers in the testing program was very positive and beneficial to all involved.

AICC input on IMO Guidelines for Ships Operating in Ice-Covered Waters - No action required, Joe Coburn has responded to Al Sutherland with comments.

AICC membership and meeting review. The next meeting will be February 15 or later. The choice would be to hold the meeting in Seattle or Washington DC. Many people prefer to meet in Seattle on board the ship. However, the terms of reference call for one meeting a year at NSF so that more of the program managers can be involved. A decision should be made before the September UNOLS Council meeting.

The first terms for Larry Lawver, Terry Whitledge and Joe Coburn are expiring in September and they are all eligible for a second term. Larry Lawver is willing to serve a second term. Joe Coburn serves as a liaison from RVOC and his continuation will be determined by RVOC at their October meeting. Jim Swift will talk to Terry Whitledge, who is completing Tom Weingartner's first term about whether or not he would like to continue on AICC. If not, Jim will solicit nominations for a new member.

Aviation Detachment - There was a discussion about whether or not an aviation detachment is required

to be on board if it is not needed for the science mission. At this point in time the Coast Guard's requirement is that they sail with an aviation detachment. They will look at how to make the aviation detachment flight requirements less of an interference with science ops. The aviation detachment provides many benefits besides direct support of the science program including locating the best leads through the ice, emergency response, medical evacuation and the ability to transport parts and equipment to the ship.

Towing Bitt - The committee and Coast Guard discussed the towing bitt and whether or not its removal was being considered by the Coast Guard. Captain Garrett's position is that there needs to be a clearly defined problem with carrying out a science program with the towing bitt in place in order to make a strong justification for its removal. AUV/ ROV ops are one type of science that might need the bitt removed. It was recommended that Jim Bellingham visit the ship and determine whether the towing bitt would affect their operations. In the meantime, the Coast Guard will prepare a PSA document to determine what the cost would be and how they would accomplish towing without the bitt.

EOS Article - AICC through Jim Swift and Kelly Falkner will work with Captain Garrett to develop an article for EOS to come out in November that highlights the science-testing program and capabilities of HEALY.

The meeting was adjourned at 10:20 am.

After the meeting there was a presentation of SOARED (Submarine Operational and Research Environmental Database) a relational database presentation program using Java applets over the web. This was developed by Johns Hopkins University/Applied Physics Lab (APL). This system has the potential for showing cruise tracks with science data displayed from any database over the web. This demonstration is available on the web at: <http://wood.jhuapl.edu/SOARED> . Paul Bienhoff made the presentation and can be contacted at: Paul.Bienhoff@jhuapl.edu

The AICC thanks the Captain and Crew of the USCG Cutter HEALY for hosting their meeting.

Appendix II

Attendees at August 22-23,2000 AICC meeting

On board USCGC HEALY, Seattle, WA

Name	Institution	Telephone	Email
Todd Adrian	HEALY	(206) 217-6300x601	tadrian@pacd13cutters.uscg.mil
Jack Bash	URI	(401) 874-6826	bash@gso.uri.edu
Paul Bienhoff	JHU/APL	(240) 228-4323	paul.bienhoff@jhuapl.edu
Jon Berkson	USCG	(202) 267-1457	jberkson@comdt.uscg.mil
April Brown	USCG/PACAREA	(510) 437-3850	aabrown@d11.uscg.mil
Lisa Clough	ECU AICC	(252) 328-1834	cloughl@mail.ecu.edu
Joe Coburn	WHOI	(508) 289-2624	jcoburn@whoi.edu
George Dupree	USCG	(202) 267-1456	gdupree@comdt.uscg.mil
Kelly Falkner	COAS-OSU	(541) 737-3625	kfalkner@oce.orst.edu
Dave Forcucci	USCG	(510) 437-3807	dforcucci@d11.uscg.mil
John Freitag	URI	(401) 874-6579	jfreitag@gso.uri.edu
Jeff Garrett	HEALY	(206) 217-6300	jgarrett@pacd13cutters.uscg.mil
Glen Hendrickson	HEALY	(206) 217-6300	ghendrickson@pacdcutters.uscg.mil
Charles Johnson	USCG	(206) 217-6596	cjohnson@pacnorwest.uscg.mil
Keith Johnson	POLAR SEA	(206) 217-6270	kjohnson@pacd13cutters.uscg.mil
Lawrence Lawver	UTIG	(512) 471-0433	lawver@ig.utexas.edu
Dan Lubin	SIO	(858) 534-6369	dlubin@ucsd.edu
Dan Oliver	HEALY	(206) 217-6300	doliver@pacd13cutters.uscg.mil
Bob Parsons	NCSS	(425) 401-9414	rpars10@aol.com
Mike Prince	UNOLS	(831) 632-4410	office@unols.org
Tom Pyle	NSF	(703) 292-7424	tpyle@nsf.gov
Simon Stephenson	NSF	(703) 292-7435	sstephen@nsf.gov
Jim Swift	SIO	(858) 534-3387	jswift@ucsd.edu

Dave Vaughn
Steve Wheeler
Bob Whritner

HEALY
POLAR SEA
UCSD

(206) 217-6300x408
(206) 217-6270
(858) 534-3785

dvaughn@pacd13cutters.uscg.mil
swheeler@pacd13cutters.uscg.mil
whbob@arcane.ucsd.edu

UNOLS Ship Time Request Form - Section ONE

=====
UNOLS Request ID #: 19990628153709

Version #: 002

Valid as of: 2000/10/05 18:41 EDT

=====
P.I. Name Last: Bellingham First: James MI.: G

=====
Institution Monterey Bay Aquarium Research Institute Reasearch vessel required for:

Address: 7642 Sandholt Rd. _ Ancillary Only

Moss Landing, CA 95039-0628 X Principal Use

_ No Ship Required

=====
Phone: (831)775-1731 Fax: (831)775-1646 E-mail: bellin@mit.edu

=====
Co P.I. Name Institution Co P.I. Name Institution

=====
Proposal Title:

Atlantic Tracking Experiment (ALTEX)

=====
Large Program Name: Other Research Purpose: Physical Oceanography

If Other, specify: ALTEX If Other, Specify:

=====
New Proposal? Y Agency Submitted to: Foreign EEZ? Y

Institution Proposal #: NSF/OPP Russia, Norway

Amount Requested: Area(s) of Operation:

Agency Proposal #: 2,272,004 AR2,AR3

NSF 99-101 Lat/Long:

Renewal? Start Date: 9/1/99 Begin: 82N 30E

Grant #: End Date: 8/31/02 End: 82N 80E

=====

Ship(s) Requested # Science

Year (Name or Size) Days Req. Optimum Dates Alternate Dates

2001 Healy 12 08/01/2001-08/31/01 08/2002

=====

Total Science & Ship Days Needed: ----- PORTS -----

30 Start: Intermediate: End:

Number in Science Party: Tromso, Norway Longyearbyen, Norway Tromso, Norway

16

=====

Equipment Required:

X Vans X P-Code GPS _ MCS _ Alvin _ AMS 120

_ Dynamic Positioning _ Multibeam _ SCS _ ROV _ 680 Cond.

=====

Other Special Equipment; Comments:

CTD Winch, Tracking System for underwater vehicles (supplied by MBARI), AUV control van, NMEA gyro & P-Code GPS outputs to control van

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UNOLS Ship Time Request Form - Section TWO

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Other Scientists Involved in Multi-P.I. Program:

Name Institution Phone E-mail

=====

Are there special considerations of the science party or cruise scheduling?

Consider science time constraints; coordination of equipment shipping;
two-ship operations; weather windows; mooring turn-around; teaching schedules
and others that will affect scheduling decisions.

=====

SCUBA Diving? No Yes -- Designate Lead Institution:

Individual dives: # Divers on board:

A list of all divers and their certification information must be submitted
to the ship's marine superintendent.

=====

Special Science Party Considerations

Foreign Nationals Medical Conditions Disabled Persons Other

Please explain:

=====

Use of Hazardous Materials? No Yes

If Yes, List type, quantity, and disposal plans:

Radioactive? Type: Quantity:

Disposal Plan:

Explosives? Type: Quantity:

Disposal Plan:

Other? Type: Quantity:

Disposal Plan:

=====

Have you read the RVOC Safety Training Manual-Chapter 1? No Yes

=====

Technician Required (CTD, SCS, MSC, etc):

=====
Equipment to be used:

Winches: Wire: Conductor Navigation: Communication:

_ Dredge/Trawl Mechanical _ 0.680" X GPS _ Inmarsat
_ Hydro _ 9/16" _ 0.322" _ DGPS _ ATS
_ CTD _ 1/2" _ .225" _ Loran _ FAX
_ Capstans _ 1/4" _ Single _ Dynamic Positioning _ Cellular
_ Multi _ Other _ SEANET

_ 12 kHz Echosounder _ Multibeam Sounder _ Air Compressor
_ 3.5 kHz Echosounder _ Magnetometer

Vans: Nets:

_ Pingers _ Refrigerated _ Dip net
_ Gravity Corers _ Magazine _ Plankton
_ Piston Corers _ Isotope Isolation _ Neuston
_ Box Corers _ Lab _ Bongo
_ Rock Dredges _ Storage _ Mid-water trawl
_ Airgun/watergun system _ Berthing _ MOCNESS
_ Explosive Handling Gear _ Chest Freezers (Size):
_ Thermometers _ Refrigerators _ Work boats
_ CTD _ Computer/peripherals
_ Rosette Sys. _ Auto Analyzer _ PC computers
_ Niskin bottles _ Salinometer _ SAIL system
Size: _ Oxygen titration _ ADCP
and number: _ Liquid Scintillation _ Gravimeter
_ Uncontaminated seawater _ IMET

=====
Other Special Equipment; Equipment Requiring Special Handling, Storage or
Installation; Comments:

CTD Winch, Tracking System for underwater vehicles, AUV control van, NMEA gyro
& P-Code GPS outputs to control van
=====

UNOLS Ship Time Request Form - Section ONE
=====

UNOLS Request ID #: 20000810145817

Version #: 001

Valid as of: 2000/10/05 18:44 EDT
=====

P.I. Name Last: Michael First: Peter MI.: J
=====

Institution The University of Tulsa Research vessel required for:

Address: Dept. of Geosciences Univ. of Tulsa _ Ancillary Only

600 S. College Ave Tulsa, OK 74104 X Principal Use

_ No Ship Required
=====

Phone: 918-631-3017 Fax: 918-631-2091 E-mail: pjm@utulsa.edu
=====

Co P.I. Name Institution Co P.I. Name Institution

Charles Langmuir Lamont-Doherty Earth Observatory Henry Dick WHOI
=====

Proposal Title:

Collaborative Research: Mantle Melting and Crustal Genesis at the Slowest
Spreading Rate: A Petrological Investigation of Gakkel Ridge, Arctic Ocean
Collaborative Research: Mantle Melting and Crustal Genesis at the Slowest
Spreading Rate: A Petrological Investigation of Gakkel Ridge, Arctic Ocean
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Spreading Rate: A Petrological Investigation of Gakkel Ridge, Arctic Ocean

Collaborative Research: Mantle Melting and Crustal Genesis at the Slowest
Spreading Rate: A Petrological Investigation of Gakkel Ridge, Arctic Ocean

=====
Large Program Name: RIDGE Research Purpose: Geological Oceanography

If Other, specify: OPP Arctic Natural Sciences If Other, Specify: Recover basement
samples from Gakkel Ridge

=====
New Proposal? Y Agency Submitted to: Foreign EEZ? Y

Institution Proposal #: NSF/OPP Norway (Svalbad), Denmark (Greenland), possibly Russia
if there is opportunity to go further east

Amount Requested: Area(s) of Operation:

Agency Proposal #: AR1,AR2,AR3,AR4

Lat/Long:

Renewal? Start Date: Begin: 80°N 0°E

Grant #: End Date: End: 89°N 95°E

=====
Ship(s) Requested # Science

Year (Name or Size) Days Req. Optimum Dates Alternate Dates

2001 Healy 59 7/31/01 - 10/02/01

=====
Total Science & Ship Days Needed: ----- PORTS -----

59 + 4 transit from Tromsø = 63 Start: Intermediate: End:

Number in Science Party: Tromsø Tromsø

15

=====
Equipment Required:

_ Vans X P-Code GPS _ MCS _ Alvin _ AMS 120

X Dynamic Positioning X Multibeam _ SCS _ ROV X 680 Cond.

=====
Other Special Equipment; Comments:

We are still deciding whether we will need .680 cond cable

=====

UNOLS Ship Time Request Form - Section TWO

=====
=====
Other Scientists Involved in Multi-P.I. Program:

Name Institution Phone E-mail

Charles Langmuir LDEO 914-365-8657 langmuir@ldeo.columbia.edu

Henry Dick WHOI 508-289-2590 hdick@whoi.edu

Steven Goldstein LDEO 914-365-8787 goldstein@ldeo.columbia.edu

David Graham Oregon State Univ 541-737-4140 dgraham@oce.orst.edu

=====

Are there special considerations of the science party or cruise scheduling?

Consider science time constraints; coordination of equipment shipping;
two-ship operations; weather windows; mooring turn-around; teaching schedules
and others that will affect scheduling decisions.

We are planning a two-ship icebreaker cruise to the high Arctic, probably with
the German ship Polarstern. Polarstern has set dates for their cruise from
7/31/01 to 10/08/01 from Tromsø to Bremerhaven. There is not much flexibility
in choosing times because of the ice conditions that can be expected at these
high latitudes for most of the year.

=====

SCUBA Diving? No Yes -- Designate Lead Institution:

Individual dives: # Divers on board:

A list of all divers and their certification information must be submitted
to the ship's marine superintendent.

=====

Special Science Party Considerations

Foreign Nationals Medical Conditions Disabled Persons Other

Please explain:

We may have German scientists on board, as this is a 2-ship, Healy +
Polarstern operation

=====
Use of Hazardous Materials? No Yes

If Yes, List type, quantity, and disposal plans:

Radioactive? Type: Quantity:

Disposal Plan:

Small amounts of hydrochloric acid for dissolving rocks. A vent or hood is
needed to exhaust acid fumes from the DC Plasma Spectrometer. Is not toxic.
Can be disposed overboard or stored in bottles on ship.

Explosives? Type: Quantity:

Disposal Plan:

Other? Type: Quantity:

Disposal Plan:

=====
Have you read the RVOC Safety Training Manual-Chapter 1? No Yes

=====
Technician Required (CTD, SCS, MSC, etc): Dredge Expert (preferably Jim Broda) ±
SeaBEAM tech

Equipment to be used:

Winches: Wire: Conductor Navigation: Communication:

X Dredge/Trawl Mechanical X 0.680" X GPS Inmarsat

X Hydro X 9/16" 0.322" X DGPS ATS

X CTD X 1/2" .225" X Loran FAX

Capstans 1/4" Single X Dynamic Positioning Cellular

Multi Other SEANET

X 12 kHz Echosounder X Multibeam Sounder Air Compressor

X 3.5 kHz Echosounder X Magnetometer

Vans: Nets:

X Pingers Refrigerated Dip net

X Gravity Corers Magazine Plankton

X Piston Corers Isotope Isolation Neuston

X Box Corers X Lab Bongo

X Rock Dredges Storage Mid-water trawl

Airgun/watergun system Berthing MOCNESS

Explosive Handling Gear X Chest Freezers (Size):

Thermometers X Refrigerators Work boats

CTD X Computer/peripherals

X Rosette Sys. Auto Analyzer X PC computers

Niskin bottles Salinometer SAIL system

Size: Oxygen titration ADCP

and number: Liquid Scintillation X Gravimeter

Uncontaminated seawater IMET

=====
Other Special Equipment; Equipment Requiring Special Handling, Storage or

Installation; Comments:

=====