



# Division of Ocean Sciences

Fall 1999 Newsletter

## FastLane Working Toward a Paperless Proposal Submission and Review Process

Since its inception, the National Science Foundation has dealt with paper copies of the thousands of proposals submitted and reviewed each year. In the interest of streamlining the process, NSF is moving toward a fully-integrated electronic proposal and award system, known as FastLane, that will provide a quick, secure, paperless record and transaction mechanism for all NSF awards, from proposal announcement to award closeout. Rapidly advancing technology is allowing us to break out of traditional modes of doing business and provides the potential for dramatic improvements in efficiency. Although the learning curve is steep, once techniques have been mastered, computer-based business solutions quickly become essential and routine. This will be the case for FastLane in the near future.

In order to make the transition from paper to electronic submissions as smooth as possible, the Division of Ocean Sciences (OCE) is working with the community and encouraging PIs to submit proposals via FastLane before the required date so that issues may be resolved before such time. In this way, the Division hopes to have learned about and solved many of the problems encountered using the FastLane



(L-R) Director of WHOI Robert Gagosian, Vice President Al Gore, and NSF Director Rita Colwell at the press conference for the release of the National Ocean Report on September 2, 1999 in Boston, MA. Photo by S. Lauzon, WHOI, MA.

system, without the immediate pressure of mandatory use (see below). Substantial progress remains to be made if the goal of 100% FastLane submission is to be achieved in a timely way (see [Figure 1](#)). In the first nine months of 1999, only 19% of proposals submitted to OCE were received via FastLane. In FY 2001, approximately 1000 more proposals will be submitted through the FastLane system!

Working toward the NSF mandated deadline for electronic submission of all proposals, OCE is still accepting the traditional paper proposal submissions for the usual unso-

### Contents

FastLane .....	1
Mail Reviews .....	3
Science Assistants .....	4
Request for Email Addresses .....	5
New Assistant Director for Geosciences .....	5
National Ocean Report .....	5
Overdue Annual and Final Reports .....	5
Program News .....	6
OCE Profile - Connie Sancetta .....	12
Staff Changes .....	13
Sites of Interest .....	13
NSB Report on the Environment .....	13
Proposal Target Dates and Deadlines .....	14
NSF at AGU .....	14
Ship Scheduling .....	15
Academic Research Fleet Review .....	15

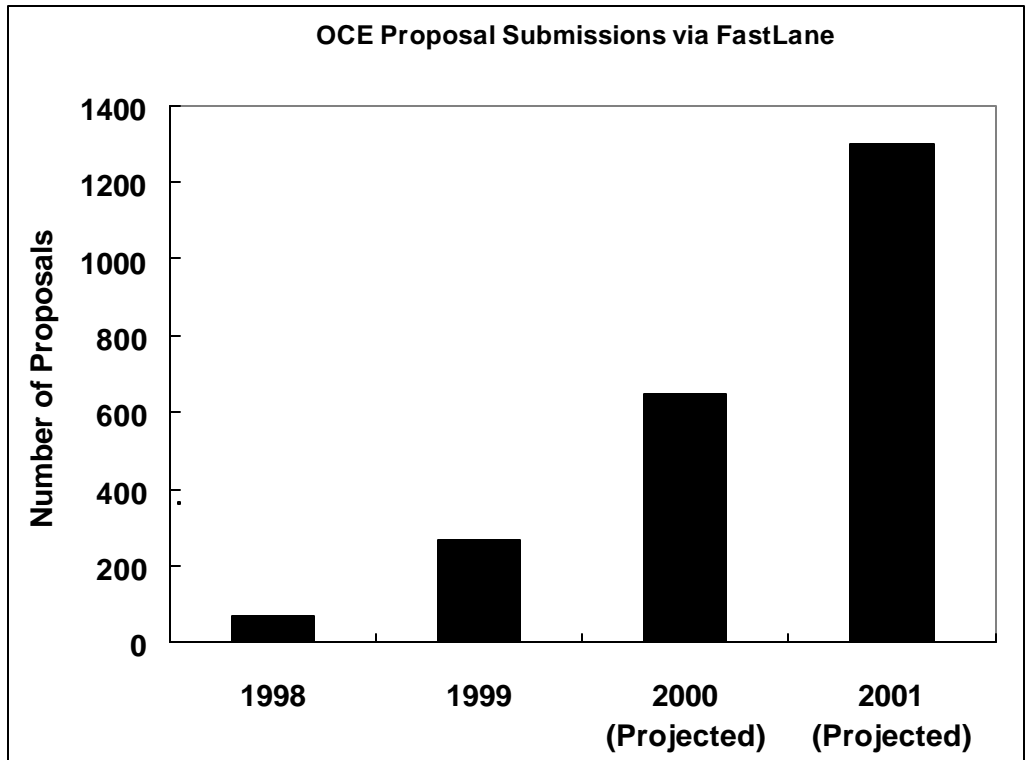
## FastLane Web Site:

[www.fastlane.nsf.gov](http://www.fastlane.nsf.gov)

lited proposal target date of February 15, 2000. However, OCE will require that **all proposals for the August 15, 2000 target date be submitted via FastLane**. Currently, OCE is requiring all proposals submitted in response to special announcements to be electronically submitted. These requirements are being put in place now to avoid the otherwise inevitable chaos a year from now when paper submission will not be accepted by NSF.

(continued on page 2)

The FastLane system is continuously undergoing enhancements to improve processing, both internally and externally. There are some challenges in its implementation that NSF still faces, but for the majority of the proposals submitted, the system works well. In the future, all proposals going out for review will be electronically distributed to the reviewers, although the schedule of this important transition is as yet undetermined. Until then, the proposals submitted via FastLane will be printed at NSF. NSF does not support the color printing of FastLane submitted proposals. Proposals containing color images should be submitted via FastLane, but until further notice, it is recommended that the required number of proposals also be submitted in the traditional paper form directly to



**Figure 1. In FY01, all proposals (estimated total 1300) must be submitted using FastLane, approximately 1000 more than in FY99.**

**In 1995, NSF had only 9 proposals submitted via FastLane, but as of July 31<sup>st</sup>, 1999, 10,908 proposals were submitted electronically .**

PIs and administrative staff can practice electronic proposal submission by utilizing the test server NSF set up for internal and external use. The test server is located at <http://www.fldev.nsf.gov>. This test server has most of the functionality of the FastLane system but allows you to enter data without the risk of accidentally submitting a proposal or the need for a personal identification number (PIN). You can fill in the cover sheet information, upload PDF files, and type budget information into the form provided or upload the budget information using the downloadable Excel spreadsheet. It is an effective way to learn how to use the system, while there is no time pressure of a deadline or target date.

OCE with the FastLane assigned proposal number on the cover page.

Another challenge for the FastLane system is the submission of collaborative proposals. Until further notice, collaborative proposals should be submitted in the traditional paper form. A method for handling collaborative proposals is being tested, and should be available to the public in the near future.

It takes time and patience to work through the FastLane proposal submission process the first time it is attempted, but it does get easier with each submission. Since FastLane gives the PI the ability to create a template of the proposal, future

*(continued on page 5)*

**The deadlines established by NSF to achieve FastLane implementation:**

October 1999	all Annual and Final Project Reporting is required to be performed via FastLane
January 2000	all Postaward Notifications and Requests are expected to be submitted electronically using FastLane
October 2000	NSF and the research community will use FastLane for all major proposal, review, award and other interactions

## Mail Reviews

Mail reviews are essential to the evaluation of practically every proposal received by the Division of Ocean Sciences (OCE). Each year we request between 6500 and 8000 mail reviews and our community is to be commended for the time and effort expended on each proposal. If every reviewer fulfills their responsibility and devotes an average of 8 hours to each review, then this corresponds to a request each year by OCE that the community expend 26 to 32 person years of effort (assuming 2000 hours per person year) on this essential process.

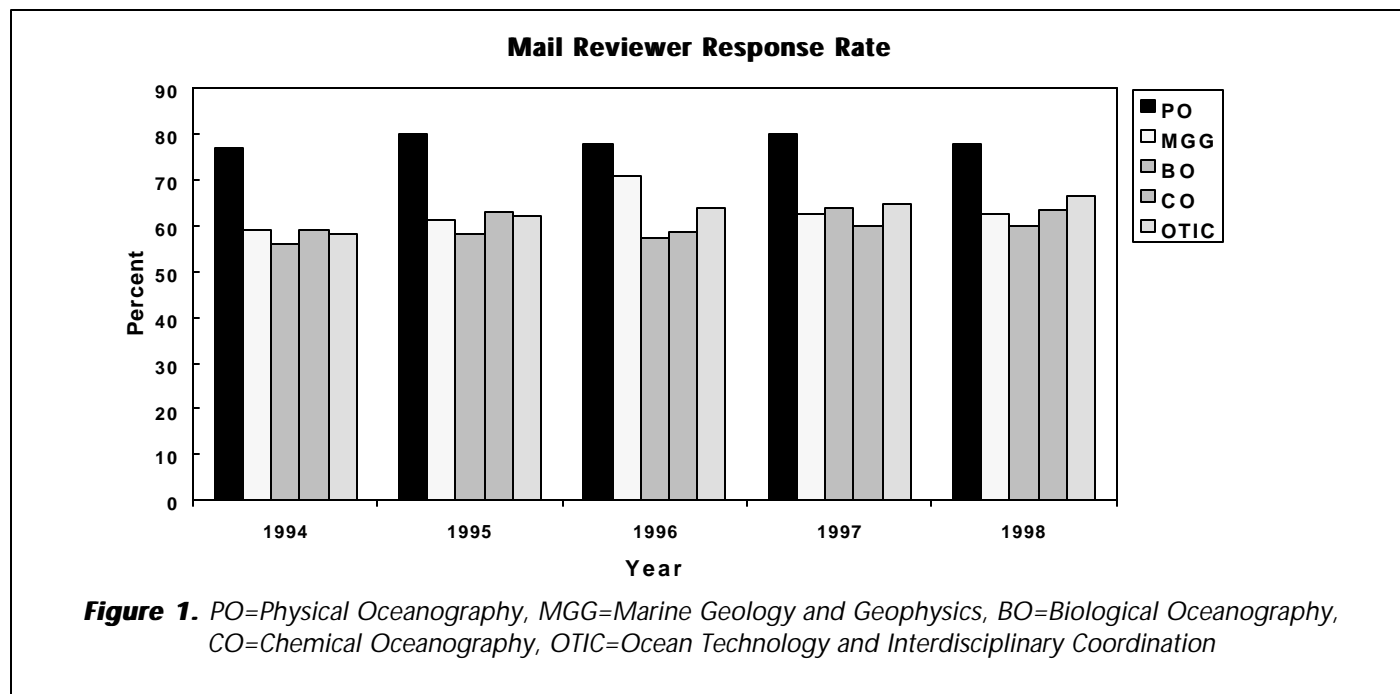
Over the past 5 years in OCE's Ocean Sciences Research Section (OSRS), 64% of the requests for proposal reviews were successful, 2% were returned because of real or perceived reviewer conflict, 0.3% were declined, and no responses were received for 34% of the requests. By comparison, the total response rates for OCE, the Directorate for Geosciences, and all of NSF, were 66%, 70% and 71%, respectively.

Figure 1 shows the distribution of reviewer response rate by program within OSRS. As can be seen, the Physical Oceanography Program consistently has a reviewer response rate that is 15-20% higher than the other programs. There is no clear understanding of the reasons for this difference.

The staff of OCE understands the magnitude of the effort required to review the increasingly large number of proposals that we receive each year. But it is an essential component of the careful NSF merit review process that lies at the heart of our mission to identify and support the highest quality basic research. We constantly search for ways to increase the re-

viewer response rate, and thus reduce the number of review requests that we have to mail out. Few practical ideas have emerged from this search. One suggestion that is frequently heard is to follow the practice of professional journals, and place an advance phone call (or email) to each potential reviewer, provide an overview of the proposal and determine their willingness (or not) to provide a review. Although the good sense of this suggestion is clear, given present staffing levels at NSF, it is simply impractical. The following example establishes this. In 1998 our Marine Geology and Geophysics program (MG&G) sent out 2444 requests for reviews. Almost all of the proposals are received in response to one of our two regular target dates (February 15<sup>th</sup> and August 15<sup>th</sup>). The review requests have to be mailed out within approximately one month of each target date. This would require the phone calls or emails (requesting community members to provide reviews) to occur within two four week periods (a total of approximately 40 working days). If on average the (extremely) optimistic assumption is made that only two calls or emails are required for each review request, then this would require a total of approximately 4900 phone calls or emails over 40 days, or more than 120 per day (*just* for the MG&G program). We do not come close to having the staffing levels required to sustain an effort of this magnitude!

While we continue to search for solutions to this seemingly intractable problem, we renew our plea to the community to inform the Program staff as soon as possible if you determine that you are unable to review a proposal. And when you do submit a review, please insure that it is received at NSF in a timely manner. While the receipt of a mail review is welcomed at any time before the final decision is made on a proposal, the value of that review, and its impact on the process, is increased substantially if it is received prior to the panel.



## The Science Assistants of OCE: Who They Are and What They Do

The workload in the Division of Ocean Sciences has increased significantly over the past several years, and this has necessitated readjustments in our staffing structure in order to more efficiently handle the growing number of proposals. A new position has been created - the Science Assistant - that represents a level of expertise which is intermediate between the experienced Program Managers, who are central to the proposal decision making process, and the Program Assistants, who provide secretarial and technical expertise in handling the flow of paperwork and proposals.

An important goal of this organizational change is to improve the quality of our service to the scientific community by improving the efficiency of our internal operations. By utilizing the new Science Assistants skills to assist the Program Managers, we hope to increase opportunities for interaction and communication with the research community.

Most of these positions are not permanent, and will be filled on a temporary basis every 2-3 years. Therefore, there will be a frequent source of opportunity for recent bachelors or masters level graduates in the ocean or ocean-related sciences to come to NSF for a short period and gain a remarkable overview of the state-of-science today. Please alert your students to these opportunities as they arise.

The following briefly introduces each of the Science Assistants in the Division.

### **Lisa Crowder**, *Marine Geology and Geophysics Program*

Lisa recently graduated from University of California, Santa Barbara with a Masters in Marine Geology and Geophysics. Her project involved examining the growth of abyssal hills to determine the width of the plate boundary zone for the 9 degrees N segment of the East Pacific Rise.

### **Katie Bowler**, *Division of Ocean Sciences*

Katie works with Mike Purdy in the Division's front office. She is editor of the newsletter and maintains the web



*The Science Assistants of OCE (from L-R): Lisa Crowder, Katie Bowler, Natasha Gray, Kandy Binkley, and Holly Smith.*

page. She also edits reports, collects data and prepares graphics for presentations and posters. Katie recently received her Masters from the University of Maryland in Zoology.

### **Natasha Gray**, *Biological Oceanography and Ocean Technology and Interdisciplinary Coordination Programs*

Natasha came to NSF last February from the Smithsonian's Museum of Natural History. She received her Masters from American University in Washington, D.C in marine invertebrate ecology. Her thesis project involved testing silicone antifouling coatings in the Chesapeake Bay to see if they deterred the settlement of invertebrate larvae.

### **Kandy Binkley**, *Ocean Sciences Research Section (OSRS)*

Kandy works with Mike Reeve, the Section Head for the OSRS. She is the "official" OCE contact person for FastLane activities. She also gathers data for various committees such as the Advisory Committee and the Committee of Visitors. She is assisting Dr. Reeve with the requirements of the Government Performance Results Act (GPRA) which are being implemented this year. Kandy has her Masters in Technical Management from Johns Hopkins University and has previously worked at the Bermuda Biological Station for Research.

### **Holly Smith**, *Oceanographic Centers and Facilities Section*

Holly received her Masters from Clark University in Worcester, MA in Environmental Science & Policy studying environmental quality indicators in an urban environment. She was previously working at the Consortium of Oceanographic Research and Education (CORE) in Washington, D.C.

## Request for Email Addresses

The Division of Ocean Sciences maintains an electronic mailing list with aliases for many of the larger ocean science-related institutions and individual email addresses. The mailing list is used to send infrequent messages to potential PIs alerting them to upcoming proposal announcement deadlines, and other useful information. If you or your institution are not currently on our mailing list, please send an email to [ocefl@nsf.gov](mailto:ocefl@nsf.gov) requesting that your institution's alias or your email address be added.

*(FastLane continued from page 2)*

submissions should be less time intensive. FastLane has 'smart form' capability that pulls in all individual and institutional information available in the NSF mainframe database, thereby minimizing the amount of repetitive typing for traditional paper submissions.

There is still time to "experiment" with FastLane and alert OCE to difficulties that arise so we can assist PIs and institutions before electronic submission is required Foundation-wide in October 2000. FastLane users needing assistance can contact the FastLane Help Desk by calling (703) 306-1142 or by sending an email to [fastlane@nsf.gov](mailto:fastlane@nsf.gov). The Division of Ocean Sciences FastLane representative, Kandace Binkley, can be reached at (703) 306-1582 or by sending an email to [ocefl@nsf.gov](mailto:ocefl@nsf.gov).

This article is one of many steps OCE is taking in order to prepare the community for the changes in the proposal submission process. In addition, the Division will be presenting a poster on FastLane at both the Fall AGU Meeting in San Francisco and the Ocean Sciences Meeting in San Antonio. The Division will keep the community informed to the best of its ability about changes in FastLane over this transition period. This change from paper to electronic submissions will prove to be challenging to both NSF staff and the community, and we ask for the community's cooperation in making this transition.

## NSF Names New Assistant Director for Geosciences

After 13 years of dedicated service, Dr. Robert W. Corell will leave the position of Assistant Director for Geosciences at the end of the year. NSF has named oceanographer Margaret Leinen of the University of Rhode Island to head its Directorate for Geosciences in January 2000. She also will be responsible for coordinating environmental science and engineering programs within NSF, and for environmental cooperation and collaborations between NSF and other Federal agencies.

## National Ocean Report

The National Ocean Report entitled, "Turning to the Sea: America's Ocean Future" was published this past September. The Ocean Report responds to President Clinton's request at last year's National Ocean Conference in Monterey, California, for recommendations from the Cabinet on a coordinated, disciplined, long-term Federal ocean policy.

The Ocean Report is a blueprint for ocean management, containing 25 chapters in four major areas: economic benefits of the ocean, global security issues, marine resource conservation and protection, and ocean exploration and research. For copies of the Report, please contact: U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Public and Constituent Affairs, 14<sup>th</sup> and Constitution Avenue, N.W., Room 6013, Washington D.C. 20236, Telephone: (202) 482-6090. Or visit: <http://www.publicaffairs.noaa.gov>.

## Overdue Annual and Final Reports

**REMINDER:** Please remember that Annual and Final Reports must be submitted via FastLane starting October 1999. Annual project reports shall be submitted to the cognizant NSF Program Officer at least three months prior to the end of the current budget period (for standard NSF grants, three months prior to the anniversary of the effective date of the grant.) Final Project Reports must be submitted within 90 days following the expiration date of the award (as defined in the award letter) to the cognizant NSF Program Officer. Approximately 30 days before expiration, NSF will send a notice to the PI to remind him/her of the requirement to file the final project report. **Failure to provide final technical reports delays NSF review and processing of pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.**

## Program News

### Biological Oceanography

Veronica Marjerison has just joined the Biological Oceanography Program and Ocean Technology and Interdisciplinary Coordination Program as a Program Assistant. Before taking her position as a Program Assistant, Veronica previously worked in the front office of OCE as a clerk/typist. Her addition should greatly improve our performance and service to the community. Veronica can be reached at (703) 306-1587 for assistance with routine proposal and award matters.

The Biological Oceanography Program has been involved in many different programs this year including GLOBEC, ECOHAB, Biocomplexity, LExEn, LTER, JGOFS Synthesis and Modeling Project, and RIDGE. The regular program panel held this spring produced a variety of awards for the community with topics ranging from microbes to whales. Seventeen percent of the 117 projects we received were funded with 35 percent of those being cooperatively funded with other programs within the Foundation. Currently we are gearing up for our fall panel with over 100 projects to review, around half of which have been submitted more than once. We will also be involved in the JGOFS Synthesis and Modeling Project this fall with proposals being reviewed alongside the regular Biological Oceanography and Chemical Oceanography Programs panels.

The first cycle of NSF's new multidisciplinary Biocomplexity Program has been completed and decisions on awards are being made. The Biological Oceanography Program is representing OCE on this cross-disciplinary activity. Thirty-four full proposals were invited for submission with topics ranging from mycorrhizal networks to deep-sea foraminifera. Final results will be announced later this Fall. The next announcement of opportunity should be out by this winter.

The interagency GLOBEC and ECOHAB panels were held this summer and funding recommendations are currently being made. The next GLOBEC announcement of opportunity for the Northeast Pacific Program / Gulf of Alaska will be released in early January 2000, with a proposal deadline probably in April 2000. Check for details on the GLOBEC NEP web site at <http://www-powelllab.biol.berkeley.edu/nep/index.html>.

The 3<sup>rd</sup> NSF-wide LExEn panel was also held this summer with the Office of Polar Programs managing the program. Ocean Sciences is the lead program for 4 awards (3 projects: Aristides Yayanos at Scripps Institution of Oceanography; Andreas Teske at Woods Hole Oceanographic Institution; Craig Cary at the University of Delaware in collaboration with Jeffrey Stein at U.C. San Diego).

We received 24 proposals for this year's LTER program on Land Ocean Margins. We are running this program with the Division of Environmental Biology and the panel will be held this fall.

Phil Taylor, prtaylor@nsf.gov  
Dave Garrison, dgarriso@nsf.gov  
Kendra Daly, kdaly@nsf.gov

### Oceanographic Technology and Interdisciplinary Coordination Program (OTIC):

#### Technology Development:

The overall objective of the OTIC Technology Development Program is to support efforts to develop new tools and techniques for conducting ocean science research. The program is especially interested in proposals that seek to lay the groundwork or develop new capabilities for collecting, analyzing, and interpreting ocean science data. To some extent, these technology development proposals are speculative, in that they are likely to address future scientific requirements, as opposed to an immediate requirement for a specific research project. As documented in several recent ocean sciences planning publications, ocean science is becoming increasingly focused on sustained, long-term observations to address appropriate time and space scales of important ocean processes. An excellent array of platforms now exist to support traditional research needs, such as capable research vessels, tethered remotely operated vehicles, autonomous underwater vehicles, and long-term moorings. However, when considering future needs, there are two areas requiring new and improved capabilities: systems for making sustained observations on the seafloor, and chemical and biological sensors.

The OCE-sponsored initiative called DEOS (Deep Earth Observatories on the Seafloor) continues to address the scientific justifications and technological requirements for a seafloor observatory system. The Ocean Studies Board is planning on conducting a workshop in late 1999 or early 2000 to seek community input to this planning process. Results from the workshop will contribute towards planning a possible NSF initiative to support the backbone or infrastructure of a distributed seafloor system into which sensors and scientific experiments will be installed. Several DEOS workshop reports and planning documents can be found at: <http://vertigo.rsmas.miami.edu/deos.html>.

The matter of improved biological and chemical sensors for long-term, sustained deployments is still an issue. The OTIC Program supports the development of innovative new

sensors that address ocean science research requirements. The Program would also like to support a workshop along the lines of the MARCHEM Symposium in 1993. MARCHEM brought together several prominent marine chemists, technologists, and industry representatives to discuss specific types of ocean measurements that needed to be made, technologies available to make the measurements, and some possible new approaches that could be proposed.

The OTIC and Physical Oceanography Programs collaborated with their ONR counterparts in the solicitation and review of the FY1999 National Oceanographic Partnership (NOPP) proposals. The NOPP solicitation called for proposals addressing two topics: topic A: Data assimilation and modeling to begin a community-wide effort of building a linked system of resources and collaborations for ocean modeling and data assimilation leading to new scientific insight and synthesis of new results with broad utility to the ocean community; and topic B: Ocean observation capabilities to develop and/or demonstrate new sampling, analytical, and interpretive techniques to improve the characterization of distributions, mechanisms, and rates of processes involving chemical and biological variables together with physical variables in the ocean. Titles and descriptions of the FY1999 NOPP projects can be found on the NOPP web page: <http://core.cast.msstate.edu/NOPPpg1.html>.

#### Coastal Ocean Processes (CoOP) program:

Proposals submitted in response to the CoOP Announcement of Opportunity for Wind-Driven Transport Processes in the NE Pacific were reviewed during the summer and two new projects will commence this fall. One project, headed by Jack Barth at Oregon State University is entitled "Coastal Ocean Advances in Shelf Transport" (COAST). The second project is headed by John Largier at Scripps Institution of Oceanography, with collaborators at San Francisco State University and elsewhere, is entitled "The Role of Wind-driven Transport in Shelf Productivity." Further information on these new projects, as well as on the ongoing CoOP Great Lakes projects can be found on the CoOP web page: <http://www.hpl.umces.edu/coop>.

Larry Clark, [hclark@nsf.gov](mailto:hclark@nsf.gov)  
Lisa Rom, [erom@nsf.gov](mailto:erom@nsf.gov)

## Chemical Oceanography

Once again the Chemical Oceanography Program, in partnership with the Biological Oceanography Program, has begun the cycle of proposal evaluations for the U.S.JGOFS Synthesis and Modeling Project. Twenty-two proposals covering virtually every aspect of the JGOFS data synthesis have been



(L-R) Jim Valdes (WHOI), Rita Colwell, Director of NSF, and Michael Purdy, Division Director of OCE, discuss one of the exhibits at the press conference for the release of the National Ocean Report on September 2, 1999 in Boston, MA. Photo by S. Lauzon, WHOI, MA.

received. As in the past, these will be evaluated by mail review and by a special panel to be convened immediately after the regular OCE-OSRS Panel in November 1999. Award decisions should be finalized by mid-January.

For a second year, the Program is managing the cross-directorate Environmental Geochemistry and Biogeochemistry (EGB) Program — now in its sixth year. The EGB Program was established as a grass-roots effort by the U.S. scientific community in dialog with seven basic science programs at NSF in 1994, to foster interdisciplinary environmental studies that transcend traditional funding categories at NSF. Watch for the EGB program announcement on the NSF web site in the late fall.

We are pleased to report that recently there has been an upsurge of inquiries from chemical oceanographers interested in joining the Program on a temporary (two-year) basis as a program officer. Our ranks look pretty solid through calendar year 2000, but if you or someone you know might be interested in coming aboard in the 2001-2003 time frame, please let us know.

Dr. Simone Metz from the Florida Institute of Technology joined the Program for a rotation as Associate Program Director in October. She brings special expertise in the geological and environmental aspects of geochemistry to us.

Upcoming Proposal Deadlines (anticipated):  
Environmental Geochemistry and Biogeochemistry: winter 2000  
U.S. JGOFS Synthesis and Modeling Project: 15 August 2000

Don Rice, [drice@nsf.gov](mailto:drice@nsf.gov)  
Dave Kadko, [dkadko@nsf.gov](mailto:dkadko@nsf.gov)

## Physical Oceanography

In addition to their regular duties, the Physical Oceanography (PO) Program staff was very involved in the review of the FY99 National Ocean Partnership Program (NOPP) proposals dealing primarily with ocean modeling and data assimilation. In FY99, NOPP, jointly funded by NSF's Division of Ocean Sciences, Office of Naval Research (ONR), and other government agencies, was able to support a number of significant initiatives in physical and interdisciplinary oceanography. See the write up on the NOPP program under Oceanographic Technology and Interdisciplinary Coordination Program on page 6 for more details.

Since it was established in September 1998, the U.S. CLIVAR Scientific Steering Committee (SSC) has been very active in providing advice to the agencies. First, in record time, the SSC wrote a position paper on the research areas of greatest interest to U.S. scientists that was distributed at the International CLIVAR Conference last December. Second, the SSC identified six areas of emphasis for U.S. CLIVAR in FY00. A detailed description of these areas can be found on the NSF web site: [http://www.nsf.gov/geo/egch/gc\\_clivar.html](http://www.nsf.gov/geo/egch/gc_clivar.html) and the U.S. CLIVAR web site: <http://www.usclivar.org>. In consultation with the SSC, the funding agencies for CLIVAR agreed to establish a U.S. CLIVAR Project Office in Washington, D.C. and the search for a director is underway. As the AIMS phase of WOCE winds down over the next few years, we anticipate that funds will become available for CLIVAR research.

The Physical Oceanography Program staff has increased the number of site visits to physical oceanography-related institutions. Recent visits have included trips to RSMAS, UW, OSU, WHOI and UConn, URI, and SIO. We plan to add several more trips to institutions over the next year. Typically we combine our visits with other meetings like ONR site visits, workshops, or steering committee meetings at or near the institution visited. We find these visits to be a good complement to national meetings and specialized workshops. The familiar setting of one's office or seminar room (there is no place like home) is an effective way to exchange information with NSF in general and the PO Program in particular, hear the concerns of individuals and groups, and exchange ideas on how we can improve our stewardship of the program. In addition to learning about current research projects and burgeoning ideas, these visits also provide an opportunity to meet young scientists and let them know how the NSF merit review process works. Favorite topics of discussions this year included CLIVAR, NOPP, FastLane, and sea-going and computing capabilities. We look forward to seeing you at the Ocean Sciences Meeting in San Antonio this January.

One of the questions that often comes up is, "The reviewers liked my proposal; why didn't it get funded?" As with other programs in OCE, the primary reason is proposal pressure. We receive more good proposals than we can support,

meaning that priorities have to be set. Individual mail reviewers typically look at only one or two proposals in a given cycle. On the other hand, the review panel looks at all the proposals as a set. For PO, we typically have eight scientists with broad and overlapping expertise who come with a range of experience and from a variety of institutions or universities. The primary role of the panelists is to reconcile the diverging opinions that might be expressed in the mail reviews and provide a sense of how each proposal compares with other proposals in that cycle. The panelists' advice is used by the Program managers to determine which of the proposals that were rated highly by the mail reviewers should be recommended for funding.

As usual, the recent (February 15<sup>th</sup> target date) proposal cycle resulted in an abundant and diverse crop of proposals. The program would like to thank the continued dedication and objectivity shown by the mail reviewers and panelists in their insightful advice and, in the case of the mail reviewers, for their generally prompt responses. The proposals funded include field programs, laboratory studies, theoretical development, data analysis, GCM development, process modeling, physical-biological modeling, and estuarine work. For details on new and active NSF awards, please use the NSF award search engine at: <http://www.fastlane.nsf.gov/a6/A6Start.htm>.

Staffing:

**Dick Lambert** retired from federal service at the end of May to pursue other interests (see "Staff Changes" for more details). All of us in the community and at NSF who have worked with him over the years owe him a debt of gratitude for his dedicated and thoughtful approach to program management. Dick has always put the interests of the PO community first and foremost.

**Eric Itsweire** has assumed the lead position for the Physical Oceanography Program. He will continue to oversee CLIVAR and will assume responsibility for the final phase of WOCE. Baptism by fire has turned rotator **Steve Meacham** into an instant veteran. While Pls often hear directly from their Program Officers, other Program and Divisional staff do a lot of work behind the scenes to make everything run smoothly. In particular, **Jeannie Belsches**, the PO Program Assistant, is hard at work, making sure that all forms, reports, and reviews are where they need to be and that all proposals actions are processed in a timely manner.

Eric Itsweire, [eitsweir@nsf.gov](mailto:eitsweir@nsf.gov)  
Steve Meacham, [smeacham@nsf.gov](mailto:smeacham@nsf.gov)



## Marine Geology and Geophysics

The first competition for funding under the MARGINS initiative took place last spring. A joint Earth and Ocean Sciences panel met in May to consider 20 proposals focused on the "Seismogenic Zone" and the "Subduction Factory" experiments and ancillary studies, as defined in the MARGINS program announcement. Twelve proposals received funding. The next deadline for the yearly MARGINS competition is January 18, 2000. The program announcement can be accessed from the NSF web site, <http://www.nsf.gov/pubs/nsf98165.html>. A new MARGINS' workshop, entitled "Source to Sink", organized by the soft-rock geology community in late September defined special-focus issues in the stratigraphy and sedimentology sub-disciplines. The MARGINS community also plans to hold two "theoretical institute" workshops along the themes of "rheology and deformation of the lithosphere at continental margins" and "the subduction factory" in the next year. Information on participation can be accessed from the MARGINS web site at: <http://www.soest.hawaii.edu/margins/Meetings.html>.

The MARGINS' community realizes that the planned experiments on continental margins will be mostly undertaken within national territorial waters of various countries. The experiments are likely to be multidisciplinary, often with broad interest from research communities of several countries. They are also likely to be expensive, often requiring multinational funding from several sources. Thus, in order to internationalize the MARGINS research effort, community representatives from France, Germany, Japan, UK and the US met at NSF in August to establish the InterMARGINS Program. InterMARGINS is envisaged to have a broad coordinating role. It will foster scientific and logistical cooperation, especially on scientific issues "that can not be addressed efficiently by nations or national institutions acting alone or in limited partnerships". An InterMARGINS office will keep the research communities in member countries informed of all MARGINS-related research activities through a biannual newsletter. For the first two years (1999-2000) the InterMARGINS office is based at GEOMAR in Kiel, Germany, after which it will rotate to another member country.

The RIDGE program was developed through several workshops and working group meetings in 1987 and 1988. An Initial Science Plan was released in 1989, and the first NSF Program Announcement for RIDGE was released in early 1990. RIDGE has been a very successful program and significant progress has been made in understanding mid-ocean ridge processes during the past decade. The RIDGE 2000 Symposium, held in Newport, OR in September was an opportunity for the community to assess the program and to refocus and plan for the transition to a new program. The strongest messages from the Symposium were the sense of community and that the community highly values the interdisciplinary nature of the program. The participants were asked to put aside individual aspirations and to take a broader view. It was obvious

from the discussions, however, that the different opinions are alive and well in the community. But that should be preserved also because it is the conflicts and the controversies that keep the science healthy. The final structure of the final program(s) will be determined in the next two years. The central program will focus on the flux of energy "from mantle to microbe" through a small number of mid-ocean ridge segments. Broader aspects of ocean mantle dynamics, and life and hydrothermal environments may also be developed.

The program officers for Earth System History (ESH) have written a new Announcement of Opportunity. It will be posted on the NSF web site once it has been approved and is expected to have a deadline at the end of January 2000. The announcement defines several new areas for research emphasis, and also incorporates recent changes in NSF policies regarding proposal submission and review.

Lisa Crowder recently joined the MG&G Program as a Science Assistant. Lisa holds a Master's degree in marine geology from the University of California, Santa Barbara. She will work with the program staff in organizing proposal review cycles, assisting with proposal management and answering routine questions from the community.

At the end of August, MG&G Program's IPA (Intergovernmental Personnel Act) program officer, Don Elthon left NSF to return to the University of Houston. Don very ably served the community in this capacity for over three years, assisting the Program in the areas of marine petrology and geochemistry. He also managed the Division's education initiatives. The Program is continuing to search for an IPA replacement for Don. We are looking for a distinguished marine geoscientist, especially in the areas of marine petrology, geochemistry or hydrothermal processes. Connie Sancetta has also announced her intention to take early retirement at the end of December this year. Thus, the Program will also be looking for a replacement for Connie in the general area of paleoceanography.

Bil Haq, [bhaq@nsf.gov](mailto:bhaq@nsf.gov)  
 Dave Epp, [depp@nsf.gov](mailto:depp@nsf.gov)  
 Connie Sancetta, [csancett@nsf.gov](mailto:csancett@nsf.gov)

---

## Ocean Drilling Program

Has it been busy, or what ?

As this article is being written, the *JOIDES Resolution* has just finished drilling in the Japan Trench on Leg 186 where seismometers were deployed in two holes. These are the first such instruments designed for permanent deployment in an ODP borehole, with one unit to be connected by cable to

shore allowing real-time data acquisition. The other instrument will have its recording package accessed by ROV's on a periodic basis. The leg appears to have gone well, though the highly technical nature of such a deployment pushed the drill crew and JR to their operating limits. The JR will now head to Singapore for a dry-dock. This will be the first extended dry-dock since the initiation of ODP drilling in 1985. Significant upgrades will occur in the vessel's station keeping, power management and heave compensation systems which should produce more efficient operations for the rest of the Program. Additionally, a number of basic systems on the ship will receive their first major inspections and refurbishment. The final objective of dry-dock is to add another level to the lab stack which will provide space for an upgraded down-hole measurement lab and a permanent home for microbiological instrumentation and experiments. With respect to instrumentation for the new microbio facility, JOI has been successful in obtaining funding from the Department of Energy, and U.S. researchers under the lead of Andreas Teske at Woods Hole have secured additional support via the NSF LExEn program. It appears that microbiological - deep biosphere studies will become a significant part of future ODP operations, with a commitment from the Program to staff up to 2 microbiologists on each leg and to support the laboratory with required technical support. With the addition of the new level, space will be available to off-load cores from the top of the lab stack, making port call activities both safer and more efficient. The ship should be out of dry-dock in mid-October and will then commence engineering tests and a drilling program to examine mantle flow south of Australia, prior to beginning the next millennium with a return to the Antarctic on the Prydz Bay shelf and slope.

Planning for the IODP has also been moving along at a brisk pace. The COMPLEX meeting in Vancouver was attended by over 200 scientists and laid out an exciting and challenging agenda for non-riser drilling in the IODP. Nick Piasias, Asahiko Taira and the rest of the COMPLEX organizing committee deserve congratulations on a job well done! The draft COMPLEX report should be available shortly via the JOI homepage. The results of COMPLEX and other extant planning documents will now form the basis for recommendations on the "JR-like" non-riser vessel. If funding can be obtained for its acquisition and operation, this "JR-like" non-riser vessel and the Japanese constructed riser-vessel, are expected to be the primary facilities in the new post-2003 drilling program. NSF has charged the U.S. Science Advisory Committee (USSAC) for ODP with undertaking a conceptual design for this drillship. USSAC has in turn established a "Conceptual Design Committee (CDC)" under the direction of Peggy Delaney to identify the detailed requirements and characteristics for the non-riser vessel, as well as the limits of this single vessel in addressing the research agenda of COMPLEX. The CDC report should be ready by early March of next year.

In the last newsletter we reported on the formation of the

IODP Planning Subcommittee, the international JOIDES activity which has been charged with identifying the specifics (science, management, and facilities) of the new Program. Ted Moore has been chosen as chair of the committee, which also includes Jamie Austin, Dieter Eichelberg and Jorn Thiede (Germany), Asahiko Taira and Jim Kinoshita (Japan), and Hans Christian Larsen (Denmark). Principal activities of the committee to date have been in soliciting and collating international input on laboratory and technical design requirements for the IODP riser vessel and formation of committees to draft the IODP science plan, to provide technical input and guidance, and to provide industry liaison. The results of the USSAC-CDC activity will be funneled to IPSC to be used in defining the overall facilities needs of the IODP. The IPSC and its new subcommittees are moving with exceptional speed. The initial science plan is expected to be available in draft form early next year, with facility and management strategy recommendations to be completed by late summer. An extensive community review procedure of the integrated plan is envisioned before it is submitted to international funding agencies late next year.

At its recent meeting in Santa Cruz, California, SCICOM scheduled JR drilling into early 2002. Based on recommendations from its science steering committees, SCICOM faced difficult decisions on the 20 or so highly evaluated drilling proposals. The schedule that ultimately evolved will see the JR making a swing through the North Pacific, western U.S. margin, equatorial Pacific, and then into the southeast Pacific. Many of the projects scheduled have relied on site-survey data acquired during cruises supported by the NSF-ODP program. As the ODP approaches its termination in 2003 we have seen a significant drop in proposal submissions to acquire data necessary to justify JOIDES drilling proposals. It is important that the transition from the ODP to the IODP be as seamless as possible, with a constant flow of high quality, well argued drilling proposals to JOIDES. Such proposals will continue to require solid marine geological and geophysical data in their justification. We will continue to support such proposals with an eye to the beginning of the IODP in the next millennium.

On a final and somewhat sad note, this newsletter will be the last before the imminent retirement of Don Heinrichs at the end of the calendar year. More than anyone, Don has been instrumental in developing the ODP into one of the premier research programs in the world. A special session has been organized at the Fall AGU to honor his many contributions to the ODP and marine geosciences. Stop by and help to wish him a prosperous future.

Bruce Malfait, [bmalfait@nsf.gov](mailto:bmalfait@nsf.gov)  
Paul Dauphin, [jdauphin@nsf.gov](mailto:jdauphin@nsf.gov)  
Jamie Allan, [jallan@nsf.gov](mailto:jallan@nsf.gov)

## Education

The single largest educational activity supported by OCE is the funding of graduate student research assistantships by the Division's regular research programs. However, in addition, a small but active dedicated education program funds a diverse set of innovative grants that support teacher enhancement, undergraduate research training, career development, and many other important education initiatives. Examples of some of these are described briefly below.

Dr. Ben Cuker at Hampton University developed a program to promote career-development of under-represented minority students that is funded by OCE. The program has a series of innovative activities centered around participation in American Society of Limnology and Oceanography meetings. Based on his work with this project, the Pew Fellows Program in Marine Conservation has selected Cuker as one of 11 Pew Fellows in this year's cohort. Each fellow will receive an award of \$150,000 to carry out an innovative, interdisciplinary project that addresses conservation challenges facing our seas.

The Division also supports the REVEL program under the direction of Veronique Robigou and John Delaney at the University of Washington. This effort to integrate marine science education and research is described at the REVEL web site <http://www.ocean.washington.edu/outreach/revel>. REVEL participates in two cruises annually and has incorporated 34 science teachers into research programs since 1996. The cruise activities can be followed on the web through the Submarine Expedition Logbook.

Dr. Matt Gilligan at Savannah State University has produced a video entitled "Bridging the Gap: Minorities in Marine Science" with support from OCE. This video is designed to make minority high school students aware of opportunities and role models in the field of marine science. Copies are available from Dr. Gilligan at [gilliganm@tigerpaw.savstate.edu](mailto:gilliganm@tigerpaw.savstate.edu).

The Research Experience For Undergraduates (REU) Program consists of two types of grants. One type is the REU Site grant which provides funding for a large group of undergraduates to participate in focussed programs – such as a summer internship program, educational cruises, etc. The second type, the REU Supplement, provides additional funding to a researcher with an active OCE grant. These supplements provide a stipend to one or two undergraduates who work on pre-defined research projects with the researcher. REU supplements can be requested at any time, while the annual deadline of the REU Site Program is September 15<sup>th</sup>.

OCE encourages submissions to the Faculty Early Career Development (CAREER) Program, a Foundation-wide activity that supports junior faculty within the context of their overall career development. This program emphasizes the importance the Foundation places on the early development of academic



*Sharonda Andress, Jennifer Fung and others displaying a MOCNESS (Multiple Opening Closing Net Environmental Sampling System) aboard the R/V Seward Johnson. Photo is Courtesy of Matt Gilligan, Savannah State University.*

careers dedicated to stimulating the discovery process in which the excitement of research is enhanced by inspired teaching and enthusiastic learning.

The Division participates in the Geoscience Education Program. One element of the program, Awards to Facilitate Geoscience Education, is funded by the Directorate for Geosciences (GEO). It provides funding for educational efforts at all levels (K-graduate) in the geosciences. The Geoscience Education Program also includes an element focussed on the digital library effort. This element is jointly funded by GEO and the Division of Undergraduate Education. The FY00 deadline has not yet been established, but is expected to be around late winter or early spring.

The Professional Opportunities for Women in Research and Education (POWRE) Program supports women who are at a significant juncture in their career, such as women who have had career interruptions, who would like training in a new technology or field, and/or who are moving from research into administration. The deadline for POWRE is December 9, 1999. For more information see the POWRE home page: <http://www.nsf.gov/home/crssprgm/powre/start.htm>.

The Division strongly encourages submissions to the programs described above that promote diversity. Projects currently funded through the Division of Ocean Sciences can be found at: <http://www.geo.nsf.gov/oce/oceeduc.htm>.

The oceanographic community is also encouraged to consider programs funded by NSF's Directorate of Education and Human Resources (EHR). More information about EHR programs will be included in future newsletters, until then, the community is encouraged to access the web site for the EHR (<http://www.nsf.gov/home/ehr/start.htm>).

Lisa Rom, [erom@nsf.gov](mailto:erom@nsf.gov)  
Beth Day, [eday@nsf.gov](mailto:eday@nsf.gov)

## OCE Profile

### Connie Sancetta

Connie Sancetta joined the Marine Geology and Geophysics Program on a temporary stint as an IPA in 1992 and loved her job so much that she stayed on for over seven years. Her excellent rapport with fellow program officers, meticulous management skills, great concern for the well being of the MG&G community and PIs, and considerable personal charm led to her becoming a permanent Associate Program Director in 1995. In 1997, she was promoted to the position of full Program Director. Never one to leave things for the last minute, Connie has recently announced that she will take early retirement at the end of 1999. She will be missed by both the OCE staff and the community that she served so capably.

A Virginia girl, Connie was born in Richmond and raised in Williamsburg where her father was a professor of economics at the College of William and Mary. Her love of science began early, apparent by the fact that she was the only girl in her high school science club. She was also a member of the school's award-winning debating team and the skills she learned there have served her well in her later "discussions" with the management in OCE.

Connie left Virginia for Rhode Island where she obtained her BS and MS degrees from Brown University under the inspiring advisorship of John Imbrie. She was at the right time and place to get involved with the CLIMAP project in its early stages. Here she mastered the innovative techniques of transfer functions and spectral analysis, which she employed quite imaginatively in her research on diatom paleoecology. Like many an East-Coaster, she could not resist the allure of the West and left Brown for Oregon State University. At OSU she began her Ph.D. work under Ted Moore, sharing an office with Margaret Leinen, a fellow graduate student. Here she applied herself diligently to become a *bonafide* member of the now legendary OSU group that would go on to significantly influence ocean sciences in our times. Her Ph.D. thesis was entitled: Oceanography of the North Pacific during the Last 18,000 Years Derived from Fossil Diatoms.

Post-OSU, Connie spent two years as a post-doc at Stanford, under the mentorship of another legend, Jerry van Andel. From Stanford she returned to her roots on the East Coast and joined Lamont-Doherty Geological Observatory in 1979. Her research was focused on determining the quality of the deep-sea microfossil record and what factors affected its preservation. She employed sediment traps to



*Connie and Rex assign reviewers for a proposal.*

observe what happens to shelled microorganisms once they start descending towards the seafloor, and published over 50 papers on diatom paleoecology, paleoclimatology and productivity. Having done "enough with sediment traps", she yielded to our invitation to come to NSF in 1992.

At NSF she has been an extremely effective program director, always feeling responsible for the PIs she served. She maintains that the part of the job she enjoyed most was being able to help scientists on how to present their ideas clearly and/or how to improve their proposals for peer review. Throughout her career, Connie has been driven by this sense to serve the scientific community. This is also evident from her extensive committee work, as a member of the MG&G and OCE advisory panels, as office-holder of several scientific societies, and as founder and first treasurer of the Association for Women Geoscientists. In addition to being a member of several professional associations, she was elected a fellow of the Geological Society of America in 1984 and American Association for the Advancement of Science in 1990.

After retirement Connie intends to continue working part time in science, but will devote much of her energy towards volunteering for children's camps and educational organizations. We wish Connie the best of luck in all her new endeavors.

Bilal Haq

## Staff Changes

Dick Lambert has retired after 17 years of service to NSF and the community, serving as Program Director for Physical Oceanography for the past 8 years. He will be staying in the area as he and his wife refurbish their new apartment. Dick has plans to remain active in the scientific community. He has accepted an offer by the American Geophysical Union (AGU) to be an "acting editor" for JGR-Oceans (Journal of Geophysical Research-Oceans) for a one-year term. Dick also plans on catching up on some writing projects. As far as hobbies go, Dick loves music. He is involved in the management of the MasterWorks Festival, a four-week summer music "camp" for high school and college students. When asked about his retirement, Dick replied, "I never considered this a 'retirement'! Retiring from the government was only a means to do some different things."

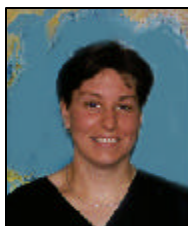
Ann Sutherland, our Financial Operations Specialist, has also retired after 15 years of service to NSF. She plans to travel and see more of her children and grandchildren. Ann and her husband plan on continuing to collect genealogical information on their families. They also both love antiquing. We do miss Ann's smiling face around the office and hope that she will come back and visit often!

Don "Squeaky Shoes" Elthon has left us to return to the university setting. He will be returning to the research community to continue his research in basalt/mantle petrology and high-temperature superconductors at the University of Houston.

With several people leaving, we also have a few new additions to our staff.



Holly Smith is our new Science Assistant for the Oceanographic Centers and Facilities Section. She comes to us from CORE where she was a Program Associate. She received her Masters from Clark University in Worcester, MA in Environmental Science and Policy.



Lisa Crowder joined us in June as our new Science Assistant for Marine Geology and Geophysics. Lisa was previously at the University of California, Santa Barbara where she received her Masters in Marine Geology.



Dottie Cudmore recently joined the Division as the Financial Operations Specialist. Dotty had previously been working in the Division of Undergraduate Education. She has been with NSF for 25 years, so she really knows her way around this place!

### Sites of Interest

- OCE <http://www.geo.nsf.gov/oce/start.htm>
- ODP <http://www.oceandrilling.org>
- JOI <http://www.joi-odp.org>
- UNOLS <http://www.gso.uri.edu/unols/unols.html>
- RIDGE <http://ridge.oce.orst.edu>
- ECOHAB <http://www.redtide.whoi.edu/hab>
- LEXEN <http://www.nsf.gov/home/crssprgm/lexen>
- LTER <http://lternet.edu>
- LMER <http://www.mbl.edu/html/ECOSYSTEMS/lmer/lmer.html>
- GLOBEC <http://cbl.umces.edu/fogarty/usglobec>
- MARGINS <http://www.soest.hawaii.edu/margins>
- JGOFS <http://www1.whoi.edu/jgofs.html>
- CLIVAR <http://www.clivar.ucar.edu/hp.html>
- WOCE <http://www-ocean.tamu.edu/WOCE/uswoce.html>
- CoOP <http://www.hpl.umces.edu/coop>



### NSB Report from the Task Force on the Environment

In August 1998, the National Science Board established the Task Force on the Environment to provide guidance to NSF in defining the scope of its role with respect to environmental research, education, and scientific assessment, and determining the best means of implementing activities related to this area. An interim report, *Environmental Science and Engineering for the 21st Century: The Role of the National Science Foundation* (NSB 99-130), presents the findings and recommendations developed by the Task Force on the Environment. This report is now available and can be found at: <http://www.nsf.gov/nsb/tfe/start.htm>.



## Proposal Target Dates and Deadlines

### Programs

### Target Dates/Deadlines

#### Ocean Sciences Research Section (OSRS)

Unsolicited Proposals for Biological Oceanography,  
Chemical Oceanography, Physical Oceanography, Marine  
Geology & Geophysics, and Instrumentation Development.

Feb. 15 & Aug. 15

Merit review panel meetings occur about 3 months after these target dates. A target date is a cutoff date for the receipt of proposals after which date the proposals will still be reviewed, but they may be delayed until the next cycle. *Proposals for field programs that require the use of University-National Oceanographic Laboratory Systems (UNOLS) ships in the following calendar year (2001) must be submitted by February 15, 2000, target date.*

#### OSRS Inter-Agency and Special Initiatives

Climate Variability and Predictability (CLIVAR)  
Earth System History (ESH)  
GLOBEC Northeast Pacific-Gulf of Alaska  
MARGINS--Focused Experiments  
Ridge Inter-Disciplinary Global Experiments (RIDGE)  
WOCE, Analysis, Interpretation, Modeling, and Synthesis (AIMS)

Feb. 15 & Aug. 15  
Jan. 30 (tentative)  
Apr. 2000 (tentative)  
Jan. 18 (deadline)  
Feb. 15 & Aug. 15  
Feb. 15 & Aug. 15

#### Oceanographic Centers & Facilities Section

Ocean Drilling Program  
Oceanographic Instrumentation  
Shipboard Scientific Support Equipment  
Ship Operations  
Technical Services

Feb. 15 & Aug. 15  
Sept. 1  
Sept. 15  
Oct. 1  
Oct. 15

#### Other NSF programs of interest to ocean scientists

Major Research Instrumentation (MRI) Program  
(<http://www.nsf.gov/cgi-bin/getpub?nsf99168>)

Jan. 18, 2000 (deadline)

#### If you are expecting to submit an MRI proposal with Ocean Sciences relevance please contact Sandy Shor at [ashor@nsf.gov](mailto:ashor@nsf.gov)

Professional Opportunities for Women in Research and Education (POWRE)  
Research Experiences for Undergraduates (REU) Program, NSF 96-102  
(Contact research program regarding REU Supplements)

Dec. 9 (deadline)  
Sept. 15 (deadline)

## NSF at

The National Science Foundation will be represented at the Fall American Geophysical Union (AGU) in San Francisco. Please stop by our booth for information on current programs. You can also meet with Program Managers, Section Heads, and Division Directors. We will also be presenting a poster on FastLane, so please come by and learn more about the electronic submission process.

### Advances in Marine Geosciences: A Session in Honor of Donald F. Heinrichs

Donald Heinrichs is retiring from the National Science Foundation after nearly 30 years of service to the oceanographic community. The objective of the special session is to recognize Don's distinguished career and commitment to advancing scientific research. This will be done through a mix of invited and contributed papers highlighting recent advances in the marine geosciences that Don has helped to foster. The session is under the Oceanography Session and is listed at OS12. We hope you can attend this very special event.

### LEn at AGU

There will be a special session at the meeting entitled "Deep Biospheres: Where and How?" focussing on LExEn. Mike Purdy, from NSF, and Mike Meyers, from NASA, will be the co-conveners for this session. Along with the invited speakers, there will be an open poster session.

## Unraveling the Mystery of the Ship Scheduling Process

The ship scheduling process begins when the scientist submits a University-National Oceanographic Laboratory System (UNOLS) ship time request form with his/her research proposal to a specific agency. The ship time request form is on the UNOLS website ([www.gso.uri.edu/unols/unols.html](http://www.gso.uri.edu/unols/unols.html)), and when filled out, is simultaneously submitted to the UNOLS Office and to ship operators. The ship schedulers use the UNOLS form to build their next calendar year schedules. In addition to scheduling cruises which directly request use of their vessel, they schedule cruises which require equipment unique to their ship, and cruises that will provide an efficient cruise track.

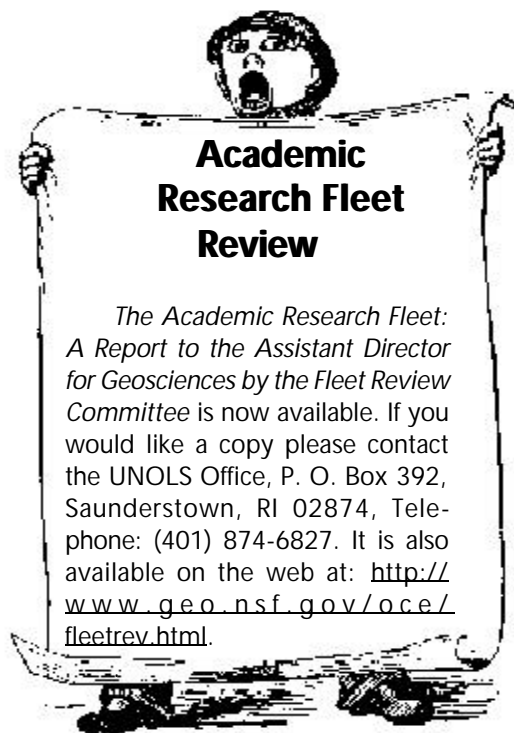
The UNOLS Ship Scheduling Committee meets in mid-July to review proposed schedules for the next calendar year. The scheduling process considers the scientific program needs, the funding status of the program, double booking of cruises, the effectiveness of the ships schedule, the effectiveness of the ship to support the program and scheduling conflicts of required scientific equipment. Every attempt is made to reduce transits and provide overall efficient schedules.

Programs sponsored by NSF, NOAA, ONR and other agencies are scheduled so as to best satisfy program needs and provide cost effective schedules. The merit review process for research projects submitted to most NSF program offices takes about six months. Proposals to the Ocean Sciences Programs must be submitted by the February 15 target date to be considered for next year cruises. Program announcements for special competitions may have deadlines or target dates somewhat later in the year. In all cases, however, the research program offices must provide support recommendations by August or the seagoing phase of a study may not be scheduled for the following year.

Preliminary ship schedules are set at the July meeting. The more complex ship schedules (typically those of the large ships), may require more time to resolve conflicts. The UNOLS Scheduling Committee reconvenes in early September to iron-out any remaining issues and finalize the ship schedules. The schedules may change throughout the year as unforeseen events arise, but every attempt is made to follow the schedule and avoid any inconvenience to the science or incurring additional operating costs.

**This newsletter is published and distributed by the Division of Ocean Sciences, National Science Foundation, 4201 Wilson Boulevard, Arlington, VA 22230.**

**For additional copies, call (703)306-1580 or visit our web site at [www.geo.nsf.gov/oce/ocenew.htm](http://www.geo.nsf.gov/oce/ocenew.htm). Editor: Katie Bowler ([cbowler@nsf.gov](mailto:cbowler@nsf.gov))**



The National Science Foundation (NSF) funds research and education in most fields of science and engineering. Grantees are wholly responsible for conducting their project activities and preparing the results for publication. Thus, the Foundation does not assume responsibility for such findings or their interpretation.

NSF welcomes proposals from all qualified scientists, engineers and educators. The Foundation strongly encourages women, minorities, and persons with disabilities to compete fully in its programs. In accordance with federal statutes, regulations, and NSF policies, no person on grounds of race, color, age, sex, national origin, or disability shall be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving financial assistance from NSF (unless otherwise specified in the eligibility requirements for a particular program).

Facilitation Awards for Scientists and Engineers with Disabilities (FASSED) provide funding for special assistance or equipment to enable persons with disabilities (investigators and other staff, including student research assistants) to work on NSF-supported projects. See the program announcement or contact the program coordinator at (703) 306-1636.

The National Science Foundation has Telephonic Device for the Deaf (TDD) and Federal Information Relay Service (FIRS) capabilities that enable individuals with hearing impairments to communicate with the Foundation regarding NSF programs, employment, or general information. TDD may be accessed at (703) 306-0090 or through FIRS on 1-800-877-8339.

The National Science Foundation is committed to making all of the information we publish easy to understand. If you have a suggestion about how to improve the clarity of this document or other NSF-published materials, please contact us at [plainlanguage@nsf.gov](mailto:plainlanguage@nsf.gov).

**NATIONAL SCIENCE FOUNDATION**  
ARLINGTON, VA 22230

OFFICIAL BUSINESS  
PENALTY FOR PRIVATE USE \$300

RETURN THIS COVER SHEET TO ROOM P35 IF YOU DO NOT WISH TO RECEIVE THIS MATERIAL , OR IF CHANGE OF ADDRESS IS NEEDED , INDICATE CHANGE INCLUDING ZIP CODE ON THE LABEL (DO NOT REMOVE LABEL).

**BULK RATE**  
**POSTAGE & FEES PAID**  
**National Science Foundation**  
**Permit No. G-69**