

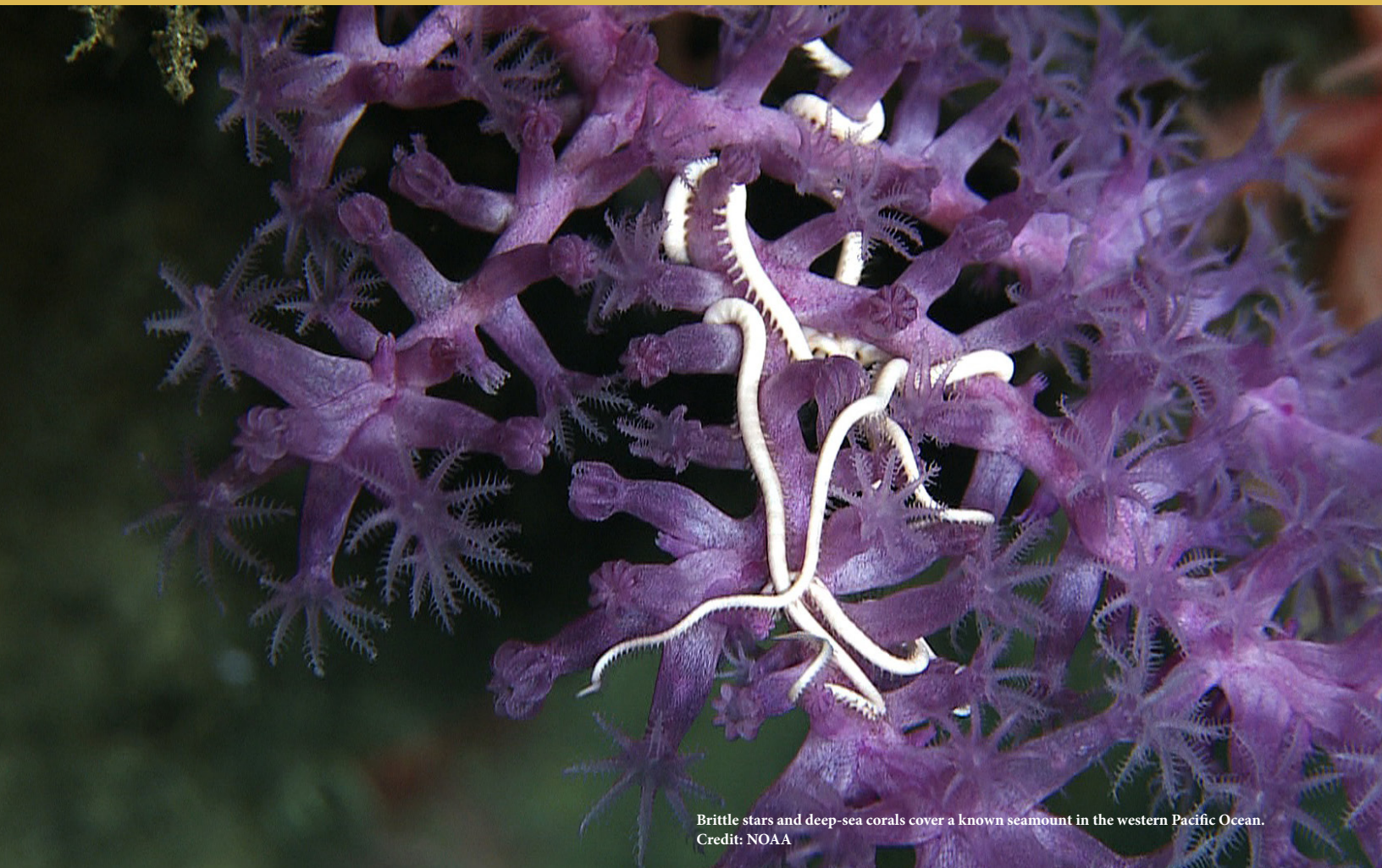
OCE

DIVISION
OF OCEAN
SCIENCES

MAKING WAVES

NEWSLETTER

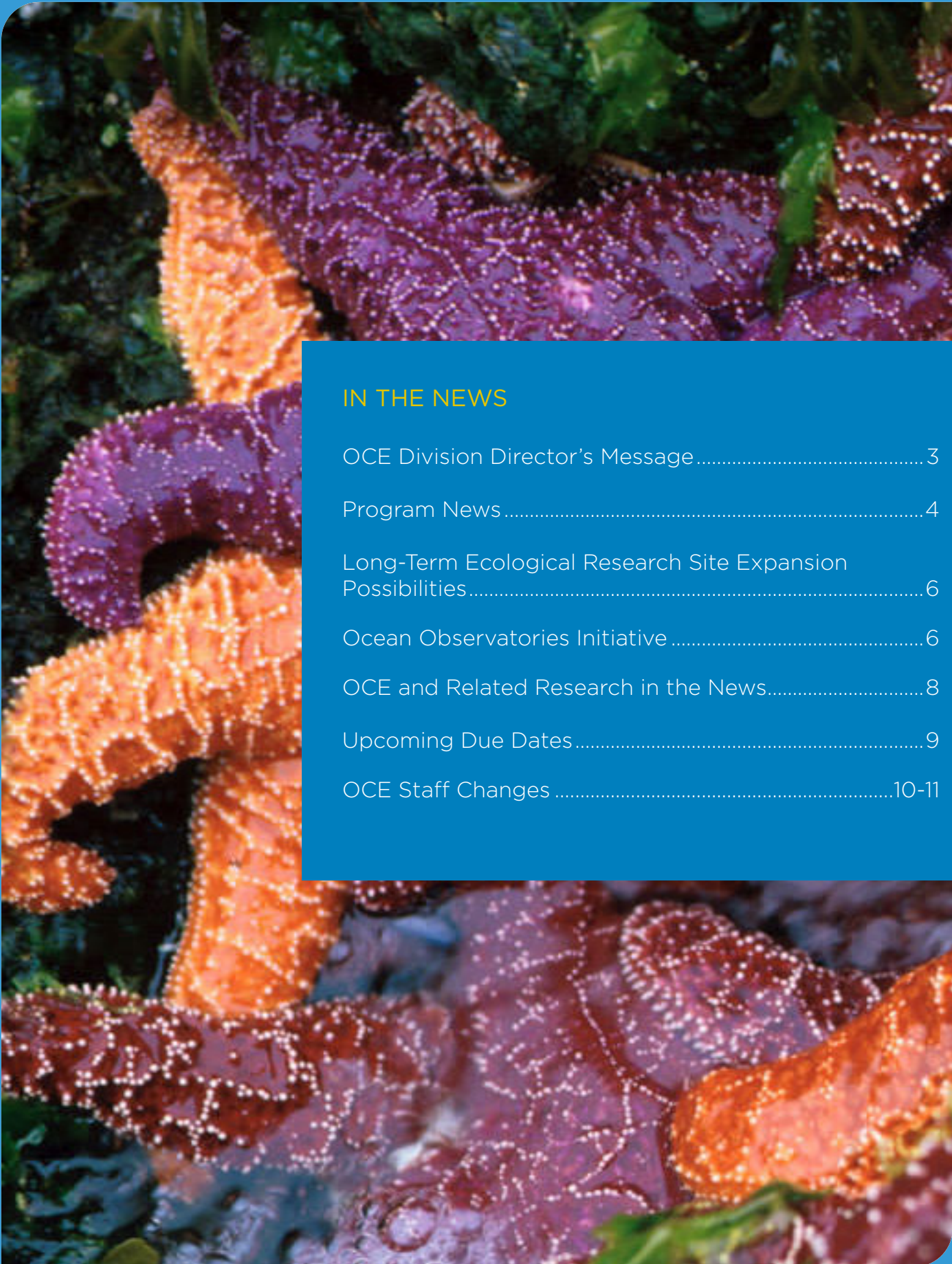
SPRING 2015



Brittle stars and deep-sea corals cover a known seamount in the western Pacific Ocean.
Credit: NOAA



National Science Foundation



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OCE Division Director's Message



Welcome to the fall 2014 OCE newsletter — Making Waves!

Greetings to one and all! As many of you know, I started at NSF in early January, and at this point have therefore had the pleasure of working here for several months. It has been an interesting and exciting time here in the Ocean Sciences Division (OCE), we are immersed in our regular busy duties of serving the community's needs through proposal review, panel discussions, answering inquiries from within NSF and from other agencies, as well as pondering a host of longer range planning issues. The NSF community, as well as the ocean sciences community at large, has been very welcoming to me from the outset and I thank you all.

I'm sure you have also heard about "*Sea Change (2015-2025 Decadal Survey of Ocean Sciences)*," the eagerly awaited report from the National Academy of Science – National Research Council, (NAS/NRC), that assesses scientific and infrastructure needs for our ocean sciences community through the coming years. My two predecessors as Division Director, David Conover and Deborah Bronk, have recently published a short piece in the Earth & Space Science News (*EOS*), explaining some of the history of this Decadal Survey, and how under their leadership the OCE team provided the independent NRC committee with the appropriate

financial and operational information to craft their report. *Sea Change* is unprecedented in its scope and specificity, and it is no exaggeration to say that it is perhaps the most influential guidance about ocean sciences that NSF has received in recent memory. Right from its tone-setting title, *Sea Change* is a document the community, NAS/NRC, and NSF can point to with regard to being an open and objective assessment of the state and future of our field. We all owe the members of the panel and the NAS/NRC staff a great and hearty "Thank you."

NSF's "reply" is being internally considered at this time of writing, and we hope to provide a comprehensive assessment before the mid-year. In addition to having many discussions with individual scientists, I have been busy discussing *Sea Change* with various ocean science organizations that have been holding their annual meetings here in DC. There are many moving pieces within the discussion, and obviously decisions about one aspect of *Sea Change's* recommendations cannot be made in isolation without consideration of implications for other aspects of OCE's portfolio. While much attention has appropriately been focused on the potential infrastructure changes, we are also discussing how to best plan for future investments in science core funding and ocean technology.

As always, we welcome feedback from any of you, not only about *Sea Change* in this particular window of time, but about your hopes, dreams, joys, and frustrations. We are committed to serving the community in the pursuit of basic knowledge about the ocean sciences, and a key aspect of such service is learning what you think and care about. Please reach out and let us know.

Rick Murray, Division Director
Division of Ocean Sciences
rwmurray@nsf.gov; 703-292-8580

Program News

NSF/OCE/ODP:

The *JOIDES Resolution* (JR) is in the midst of an exciting two years-worth of drilling in the Indian Ocean, the first drilling there since the Ocean Drilling Program (ODP) over 15 years ago and the first to occur in Indian territorial waters (<http://iodp.org/expeditions>). Operations over the last year have borne the fruit of the new Integrated Ocean Drilling Program (IODP) model of scheduling the JR along an efficient ship's track; along with new efficiencies introduced by the new *JOIDES Resolution* Science Operator, JR operational costs have been significantly reduced. Let's also keep hoping for continued reduction in fuel prices!

Many of you are waiting for an announcement regarding the competition for the United States Science Support Program Solicitation, an award that will provide support for scientists participating in the International Ocean Discovery Program. NSF is still conducting a financial review of a new award, but we hope to make an announcement soon.



Captain Ed Oonk:

On a sad note, we have recently learned of the passing of Captain Ed Oonk, beloved Master for so many ODP Legs before his retirement, after a long and courageous battle with cancer. Captain Oonk was renowned for his good-natured strength of character (a true Dutchman!), and was immortalized through his leadership during the 30m seas of ODP Leg 163. We will miss him greatly and are indebted to his many contributions to scientific ocean drilling.

New Rotator Recruiting for Physical Oceanographer:

In the coming weeks, we expect to launch a search for a new Rotator in the Physical Oceanography Program, either at the Associate Program Director or Program Director level. Please keep an eye out for the job announcement as a Dear Colleague Letter, on www.usajobs.gov and elsewhere. If you are interested in learning more about the rotator position, please contact Dr. Eric Itsweire (eitsweir@nsf.gov) or Dr. B. Mete Uz (bmuz@nsf.gov). We anticipate that the new rotator would come on board at the end of 2015.)

Annual and Final Report Approval of OCE Awards:

OCE Program Directors continue to chase down overdue project reports and have increasingly had to return annual and final reports for revision by the PI. As a reminder, annual reports are due in the 90-day window ending with the anniversary date of the award and should be submitted at the beginning of that window to allow the cognizant

program officer time to review the report and request revisions as appropriate, (see AAG [Chapter II.D](#)). Final project reports and project outcome reports are due in the 90-day window starting with the end date of the project and should also be submitted at the beginning of that window for the same reasons. Some of these annual and final reports are rejected because information that belongs in the searchable sections of the report is instead provided as a PDF file. PDFs are limited to figures and tables (see [Project Report Frequently Asked Questions for Research Organizations](#)). The most common shortcoming is the failure to follow data sharing requirements. Please refer to the [Division of Ocean Sciences Data and Sample Policy](#) if you are not familiar with the Division's policies.

Please see special Program-specific guidance on data submission below:

Biological Oceanography: Projects supported by the Program must register with the [Biological and Chemical Oceanography Data Management Office \(BCO-DMO\)](#) and reports must cite the BCO-DMO file as a “Research Product” with a hyperlink to it. A project description and NSF data management plan should be available at the time of your first annual report. Information about field programs and data should appear in subsequent reports in a timely manner as described in the OCE Data Policy (see link above). With final reports, a portion of, if not all, data should be publicly available. BCO-DMO staff will advise and help with issues such as cross linking collaborative awards, linking to data deposited in other repositories, and embargoing data when appropriate. With [BCO-DMO](#) assistance, managing and sharing data can be relatively painless.

Chemical Oceanography Program: Data generated from projects supported by the Chemical Oceanography Program must be made available to the public by submission to at least one appropriate oceanographic data repository. These include, but are not necessarily limited to, the [Biological and Chemical Oceanography Data Management Office \(BCO-DMO\)](#) at the Woods Hole Oceanographic Institution and National Oceanic and Atmospheric Administrations (NOAA's) [National Ocean Data Center](#).

Marine Geology and Geophysics (MG&G): Data generated through Marine Geology and Geophysics supported projects must be made publicly available through the appropriate NSF-approved data center. These include, but are not limited to, [IEDA](#) (Interdisciplinary Earth Data Alliance) and [NOAA's World Data Center for Paleoclimatology](#). Note that IEDA offers a [Data Management Plan Tool](#) that can be used to prepare data management documents required in NSF proposals, regardless of where data are eventually submitted.

Physical Oceanography Program: Data generated from projects supported by the Chemical Oceanography Program must be made available to the public by submission to at least one appropriate oceanographic data repository. These include, but are not necessarily limited to, the [CLIVAR & Carbon Hydrographic Data Office](#) at the Scripps Institution of Oceanography and NOAA's [National Ocean Data Center](#) and [National Climate Data Center](#).

Long-Term Ecological Research Site Expansion Possibilities

OCE is considering soliciting proposals for one or more coastal ocean ecosystem Long Term Ecological Research (LTER) sites.

The LTER program is an effective mechanism to address some of the more pressing environmental and sustainability issues of our time. Developing a competitive proposal for the program will require significant effort. Coastal ocean LTER investigators organized a community discussion to share their experience with developing an LTER site, science questions addressed, and consider what an expanded network might look like at the Aquatic Sciences Meeting (ASLO) in February 2015. Their presentations are available from the links below:

Presentation 1 — by Mark Ohman, University of California, San Diego (UCSD), provides an overview of the NSF LTER program

Presentation 2 — by Russ Schmitt, University of California, Santa Barbara (UCSB), provides an overview of the current coastal ocean LTERs

Presentation 3 — by Chuck Hopkinson, University of Georgia, (UGA), provides examples of cross-site research

We also anticipate further discussion at the LTER All Scientists Meetings in late August 2015. **It is important to emphasize that presently this is a potentially developing plan and we do not have a budget commitment.** However, we do want the ocean sciences community informed and ready if the funding does become available.

If you would like to stay informed of the potential developments concerning the possible expansion of coastal ocean LTERs and receive information on community discussions at meetings, send an email to listserv@listserv.nsf.gov with the message body “subscribe LTER-OCE.” The subject may be left blank. The listserv is for announcements only.

Ocean Observatories Initiative

The Ocean Observatories Initiative (OOI) Project is in the final months of mooring deployments, cyberinfrastructure build-out, and system commissioning. Global moorings at Papa, Irminger, and 55S (Southern Ocean) are installed and the project team is currently deploying moorings and gliders at the Argentine Basin site. The Cabled Array is installed and the remaining Coastal moorings will be deployed during spring 2015. The OOI data will be freely available via a graphical user interface during summer 2015. The Ocean Observing Science Committee will sponsor user workshops in the fall of 2015. Upon system commissioning in summer 2015, NSF will provide the community with a Dear Colleague Letter announcing data availability. The Consortium for Ocean Leadership will provide opportunities during spring 2015 for Beta system users. Please consult the OOI website for instrument information, deployment and data status, as well as the OOI Beta user opportunities: www.oceanobservatories.org.

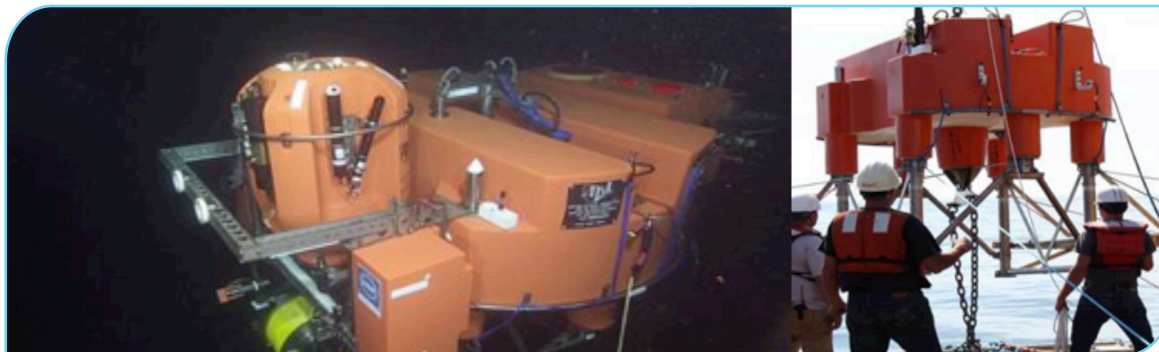


Photo Source: UW Cabled Shallow Water Profiler Platform

Report on the Implementation of the National Ocean Policy:

In late March, the National Ocean Council released the first *Report on the Implementation of the National Ocean Policy*. Among the activities described are a host of steps to advance research and monitoring activities to help protect people and communities from harmful algal blooms; develop data-driven tools to map the extent of sea-ice and to assist emergency responders and environmental resources managers; promote sustainable energy development and aquaculture practices; and issue step-by-step guidance to help coastal communities assess vulnerabilities and develop plans to cope with the impacts of climate change, extreme weather, and ocean acidification. The Report on the Implementation of the National Ocean Policy demonstrates how the Administration's *National Policy for the Stewardship of the Ocean, Our Coasts, and the Great Lakes* has been translated into on-the-ground actions through the *National Ocean Policy Implementation Plan*.

Regional Framework Plan for Marine Seismics—OCE/MGG Spring 2015:

OCE has carefully considered input from the community and the Marcus Langseth Science Oversight Committee (MLSOC) regarding ways to improve planning for marine seismic data acquisition. OCE is converging towards implementation of Regional Framework Planning beyond 2015. Taking a regional approach can provide a useful framework for the community to develop proposals or suites of proposals on a basin-by-basin scale. Such planning will require careful integration with other OCE science programs, and platforms of opportunity and other necessities may also spur work that deviates from the Regional Plan.

The framework is designed to:

- Provide guidance about when to submit proposals for work in a particular area.
- Encourage investigators (both US and potential international teams) with new ideas for work along the path to submit a proposal for work that could mesh geographically (modest transit) with the framework path.
- Provide rotating access to all regions of scientific interest within a timeframe of several years.

The table below lists North Atlantic/Mediterranean Region operations scheduled for 2015. The next opportunity for concerted NSF deep seismic data acquisition in this region is likely to be after 2019/20. For 2016, it is anticipated that the focus will be on the Equatorial- and South Atlantic region, to be potentially followed by the Southeastern Pacific in 2017. Additional details will be provided in summer, 2015. Please feel free to contact OCE/MGG for further information.

2015 SEISMIC IMAGING CRUISES

Investigator	Project	Fund	Dates	Platform
van Avendonk	Cayman Trough (German collaboration*)	NSF	Apr, 22 days	R/V <i>Meteor</i>
Hutchinson	Mid-Atlantic Extended Continental Shelf	USGS	Apr, 27 d	R/V <i>Langseth</i>
Mountain	New Jersey Sea Level – 3D Imaging	NSF	Jun, 42 d	R/V <i>Langseth</i>
Hooft-Toomey	Santorini Volcanic System	NSF	Oct/Nov, 23 d	R/V <i>Langseth</i>
Rychert (UK)	Equatorial Mid-Atlantic Ridge Lithosphere	NERC	Dec, 17 d	R/V <i>Langseth</i>

OCE and Related Research in the News

- 1 New map uncovers thousands of unseen seamounts on ocean floor
- 2 Primary productivity--"nature's alchemy"--focus of annual NSF Long-Term Ecological Research mini-symposium
- 3 Ocean acidification a culprit in commercial shellfish hatcheries' failures
- 4 Virus fingered as top suspect in West Coast sea star wasting disease
- 5 Where did the Deepwater Horizon oil go? To Davy Jones' Locker at the bottom of the sea
- 6 Back to the future? Past global warming period echoes today's
- 7 'Big bang' of bird evolution mapped by international research team
- 8 Unmanned underwater vehicle provides first 3-D images of underside of Antarctic sea ice
- 9 Antarctic seals may use Earth's magnetic field to navigate while hunting
- 10 NSF-funded Antarctic drilling team is first to bore through hundreds of meters of ice to where ice sheet, ocean and land converge
- 11 Increasing greenhouse gases linked to rains over Africa thousands of years ago
- 12 No limits to life in deep sediment of ocean's "deadest" region
- 13 The 'intraterrestrials': New viruses discovered in ocean depths
- 14 Monster hurricanes struck U.S. Northeast during prehistoric periods of ocean warming

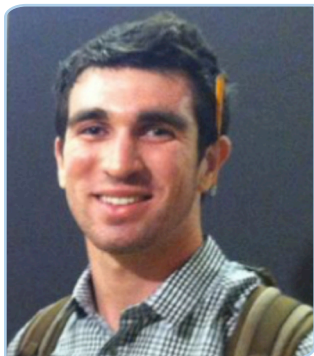
Upcoming Due Dates

Most OCE programs continue to have 2 target dates per year for unsolicited proposals: February 15 and August 15. The Ocean Technology and Interdisciplinary Coordination (OTIC) Program has a single annual target date of February 15. For programs under the Oceanographic Facilities and Equipment Support umbrella, please see solicitation linked below.

NSF funding opportunities with their upcoming due dates:

Title	Program Guidelines	Due Dates
Faculty Early Career Development (CAREER)	15-555	Full Proposal: July 23, 2015
Improving Undergraduate STEM Education: Pathways into Geoscience (IUSE: GEOPATHS)	15-526	Letter of Intent: August 14, 2015 Full Proposal: October 5, 2015
GeoPRISMS Program	15-564	Full Proposal: July 15, 2015
Innovation Corps Sites Program (I-Corps Sites)	14-547	Full Proposal: June 9, 2015
Coastal SEES	14-502	Full Proposal: October 2, 2015
Oceanographic Facilities and Equipment Support	13-589	Full Proposal: Accepted Anytime Full Proposal: November 16, 2015 Full Proposal: December 15, 2015
Paleo Perspectives on Climate Change (P2C2)	13-576	Full Proposal: October 15, 2015
Research Experiences for Undergraduates (REU)	13-542	Full Proposal: May 22, 2015 Full Proposal: *August 26, 2015
Geophysics (PH)	12-598	Full Proposal: June 3, 201 Full Proposal: December 2, 2015
Biological Oceanography		Full Proposal: August 15, 2015
Chemical Oceanography		Full Proposal: August 15, 2015 Full Proposal: February 15, 2016
Marine Geology and Geophysics		Full Proposal: August 15, 2015
Ocean Technology and Interdisciplinary Coordination		Full Proposal: February 15, 2016

OCE Staff Changes



Aaron Rosenberg

Aaron Rosenberg is joining the Division of Ocean Sciences as a Sea Grant John A. Knauss Marine Policy Fellow. His research interests include air-sea interaction, marine weather forecasting, model parameterization, storm surge prediction systems, and ocean observations. Aaron received a Bachelor of Arts in Marine Science from Boston University and dual Masters of Science in Environmental Engineering and Oceanography from the University of Connecticut. While at the University of Connecticut Aaron taught Scientific Programming for Marine Science and plans to continue with STEM outreach. He will be assisting in science coordination for the Ocean Observatories Initiative and looks forward to contributing to interdisciplinary cross-directorate funding programs.



Kaitlyn Schroeder-Spain

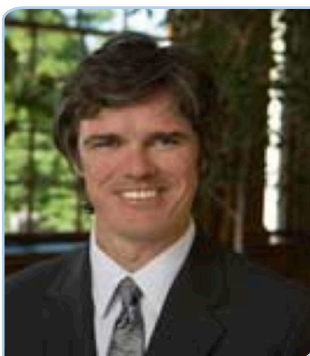
Kaitlyn Schroeder-Spain is a John A. Knauss Marine Policy Fellow in the Division of Ocean Sciences. She is currently completing her Ph.D. in Coastal and Marine System Sciences from Texas A&M University – Corpus Christi. Her dissertation research focuses on the effects of pesticides on blue crab predator-prey interactions and physiology. Kaitlyn also taught Principles of General Ecology while at Texas A&M and has an interest in marine policy. The fellowship position, offered through Sea Grant, is for one year; during this time Kaitlyn hopes to gain a better understanding of the review process and ocean sciences scientific community at NSF. She will also work with an interagency group that aims to develop a scientific framework for Ecosystem-Based Management approaches.



Bill Miller

Bill Miller joined the Chemical Oceanography Program in January as a Program Director. His research is in marine photochemistry, examining its integrated role in carbon and trace gas cycling, ocean optics, reactive oxygen species and metal redox chemistry, and their biological consequences. He blends lab studies with satellite imagery to calculate photochemical rates on global to regional scales and his favorite color is UV. Born and raised in Monroeville, Alabama, he has degrees from Wake Forest (BA, Biology), South Florida (MSc, Marine Science), and GSO at the University of Rhode Island, (PhD, Chemical Oceanography). His NRC postdoc was with the Environmental Protection Agency in Athens, Georgia, before starting his first faculty position in the Oceanography Department at Dalhousie University, Halifax, Nova Scotia. He then returned to Athens, Georgia, where he is a professor in Marine Science at the University of Georgia.

OCE Staff Changes



Brad Moran

In January, the Division of Ocean Sciences said farewell to Dr. Brad Moran who served for three years as an IPA “rotator” Program Officer in the Chemical Oceanography Program. Although most rotators typically stay right here with us for two years, Brad had the exceptional opportunity of serving for one year with the White House Office of Science and Technology Policy (OSTP). He returned to NSF last summer for a final few months as Program Officer before returning to his academic post at the Graduate School of Oceanography at the University of Rhode Island. We are all grateful to Brad for his service and dedication to the ocean sciences community and to NSF.



Anton Post

Anton was with us for two and a half years serving as a program director for the Biological Oceanography Program. Anton brought a broad range of expertise to the Program from marine microbial ecology to developing international collaborations. In January 2015, he started a new appointment as director of the University of Rhode Island’s Coastal Resources Center (CRC) at the Graduate School of Oceanography.



Sara Paver

Sara completed her term in OCE as a Knauss Sea Grant Fellow at the end of January. During her year at NSF, she led efforts for the Science, Engineering and Education for Sustainability (Coastal SEES), Principal Investigator’s meeting and participated in the grant review process for the Biological Oceanography program. After her departure, Sara started a postdoc with Maureen Coleman at the University of Chicago.

MAKING WAVES

This newsletter is designed to share timely information about the National Science Foundation's Division of Ocean Sciences. If you have comments or questions, please communicate with the relevant OCE program officer, or with Jane Montgomery who serves as newsletter editor.

The newsletter will be distributed by email and posted on the OCE homepage. Please feel free to forward to colleagues. If you would like to subscribe to the OCE Newsletter, please follow the instructions below:

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