



# The National Science Foundation (NSF)

- Annual budget of \$8.8 billion (FY 2022)
- Provides about 27% of the total federal budget for basic research conducted at U.S. colleges and universities.
- The **major** source of federal backing in many fields such as mathematics, computer science and the social sciences. (Notice not Ocean Science !)
- Structure broadly parallels that of a university and includes all areas of science and engineering except clinical medical research.



# The National Science Foundation

Generally focused on **curiosity driven basic research**, with some exceptions (e.g. TIP Directorate)

Focused on **developing new understanding** (as opposed to knowledge, information, data or products).

Two kinds of opportunities:

- Core programs (sustained over decades or more)
- Special solicitations (come and go as needed)



# Division of Ocean Sciences

## Marine Geosciences Section

Chemical  
Oceanography Program  
(CO)

Marine Geology and  
Geophysics Program  
(MGG)

## Integrative Programs Section

Ocean Education Programs  
including OCE PRF

Ocean Observatories  
Initiative (OOI)

Oceanographic Facilities,  
Ship Operations and  
Support, Ship  
Instrumentation, IODP, etc.

Ocean Technology and  
Interdisciplinary  
Coordination (OTIC)

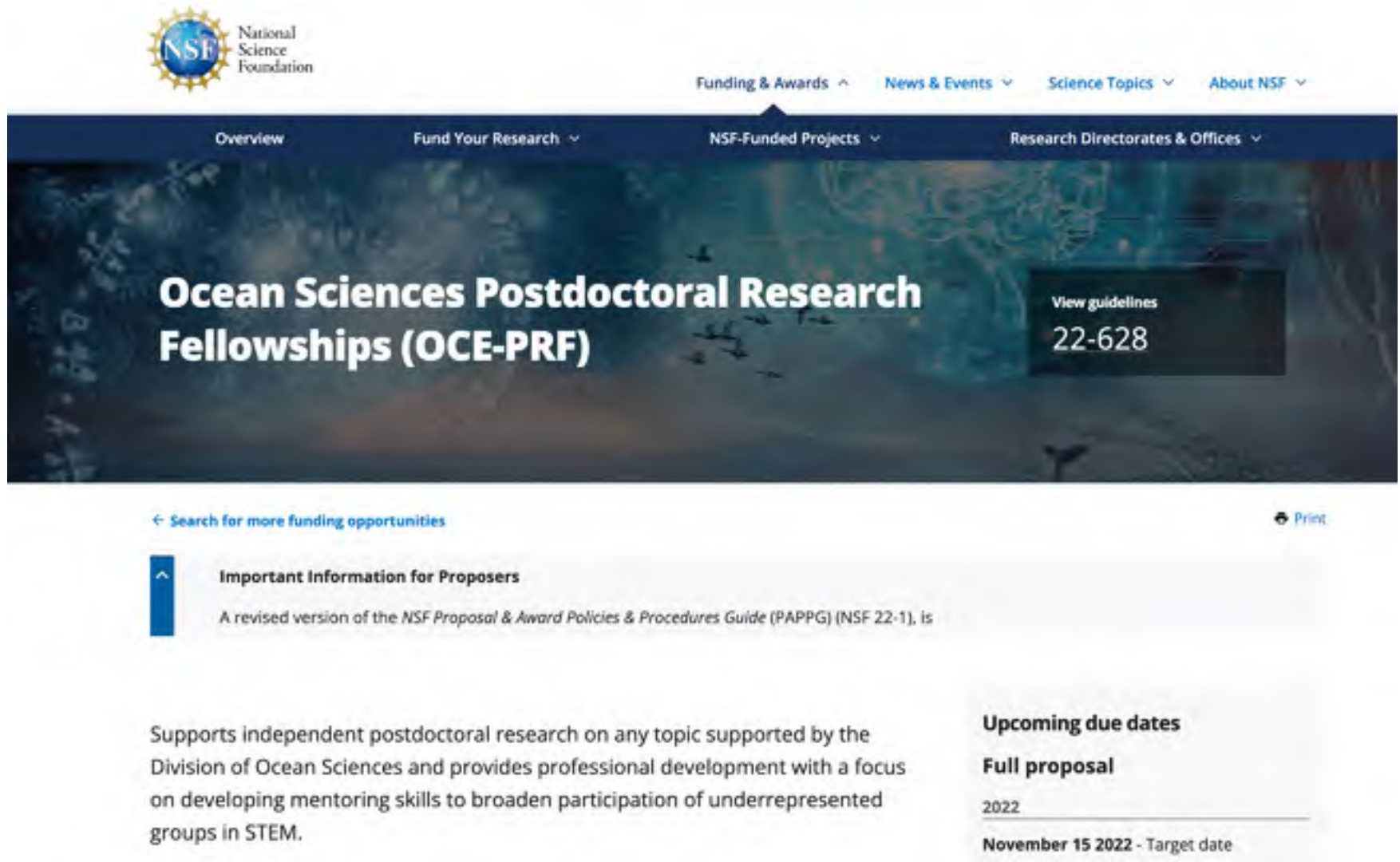
## Ocean Section

Biological  
Oceanography Program  
(BO)

Physical Oceanography  
Program (PO)

OCE-PRF :

“... developing mentoring skills to broaden participation of underrepresented groups in STEM.”



The screenshot shows the NSF Ocean Sciences Postdoctoral Research Fellowships (OCE-PRF) webpage. At the top is the NSF logo and navigation links: Funding & Awards, News & Events, Science Topics, and About NSF. Below this is a dark blue header with links: Overview, Fund Your Research, NSF-Funded Projects, and Research Directorates & Offices. The main content area features a large image of a coral reef with the title "Ocean Sciences Postdoctoral Research Fellowships (OCE-PRF)" and a button "View guidelines 22-628". Below the main image is a search bar and a link to "Search for more funding opportunities". A section titled "Important Information for Proposers" contains a link to the "NSF Proposal & Award Policies & Procedures Guide (PAPPG) (NSF 22-1)". A paragraph describes the fellowship: "Supports independent postdoctoral research on any topic supported by the Division of Ocean Sciences and provides professional development with a focus on developing mentoring skills to broaden participation of underrepresented groups in STEM." On the right, a section titled "Upcoming due dates" lists "Full proposal" for "2022" with a target date of "November 15 2022".

NSF National Science Foundation

Funding & Awards ^ News & Events ^ Science Topics ^ About NSF ^

Overview Fund Your Research ^ NSF-Funded Projects ^ Research Directorates & Offices ^

**Ocean Sciences Postdoctoral Research Fellowships (OCE-PRF)**

[View guidelines 22-628](#)

[← Search for more funding opportunities](#) [Print](#)

**Important Information for Proposers**

A revised version of the *NSF Proposal & Award Policies & Procedures Guide (PAPPG)* (NSF 22-1), is

Supports independent postdoctoral research on any topic supported by the Division of Ocean Sciences and provides professional development with a focus on developing mentoring skills to broaden participation of underrepresented groups in STEM.

**Upcoming due dates**

**Full proposal**

2022

November 15 2022 - Target date



www.unols.org

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## UNOLS DESIGNATED VESSELS

HOME / UNOLS DESIGNATED VESSELS

### Ships/Facilities

- UNOLS Vessels and Contacts
- Small Research Vessel Inventory
- UNOLS-Designated Facilities
- Other Facilities
- UNOLS Equipment Inventory
- Greening the Fleet Initiative

### The US Academic Research Fleet (UNOLS Designated Vessels) & Vessel Contacts

Vessel Name	Operator	LOA	Yr Built /Conv.	Sci Party	Owner
<b>Global Class Vessels</b>					
<b>THOMAS G. THOMPSON</b>	<b>UW</b>	<b>274/84</b>	<b>1991</b>	<b>36</b>	<b>Navy</b>
Operator	CAPT Robert Kamphaus	1-206-685-5672		kamphaus@uw.edu	
Technical	Loren Tuttle	1-425-463-6899		ltuttle@uw.edu	
Scheduling	CAPT Robert Kamphaus	1-206-685-5672		kamphaus@uw.edu	
<b>ROGER REVELLE</b>	<b>SIO</b>	<b>273/83</b>	<b>1996</b>	<b>37</b>	<b>Navy</b>
Operator	Joost van der Zwaag	858-534-1643		jvanderzwaag@ucsd.edu	
Technical	Lee Eliett	1-858-534-2423		eeliett@ucsd.edu	
Scheduling	Hannah Delapp	1-858-534-2434		shipsked@ucsd.edu	
<b>ATLANTIS</b>	<b>WHOI</b>	<b>274/84</b>	<b>1997</b>	<b>37</b>	<b>Navy</b>
Operator	Timothy Twomey	1-508-289-2624		twomey@whoi.edu	
Technical	David Fischella	1-508-289-3777		dfischella@whoi.edu	
Scheduling	Kerry Strom	1-508-289-3938		kstrom@whoi.edu	
<b>SIKULIAQ</b>	<b>UAF</b>	<b>261/79</b>	<b>2014</b>	<b>24</b>	<b>NSF</b>
Operator	CAPT Doug Baird NOAA/Ret.	1-907-224-5261		ddbaird2@alaska.edu	
Technical	Ethan Roth	1-858-232-1848		ehroth@alaska.edu	





OCEAN  
OBSERVATORIES  
INITIATIVE

# An NSF-funded Large Facility

Operated by WHOI (lead), UW and OSU

It is a networked infrastructure of science-driven sensor systems to measure the physical, chemical, geological and biological variables in the ocean and seafloor as well as the overlying atmosphere, providing a fully integrated system collecting data on coastal, regional and global scales.



OCEANOBSERVATORIES.ORG  
△

NSF Contact: [gvoulgar@nsf.gov](mailto:gvoulgar@nsf.gov)

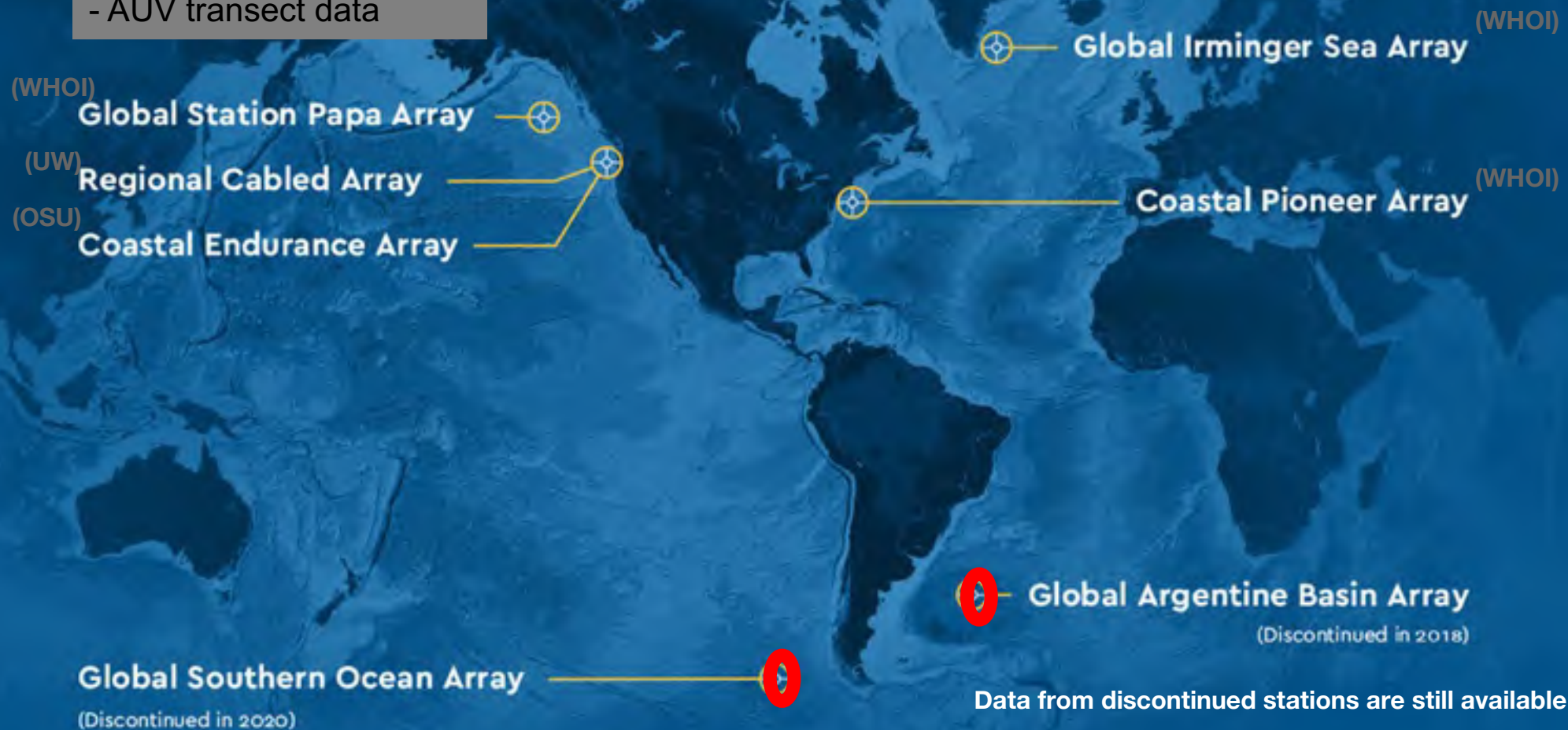
<https://oceanobservatories.org>



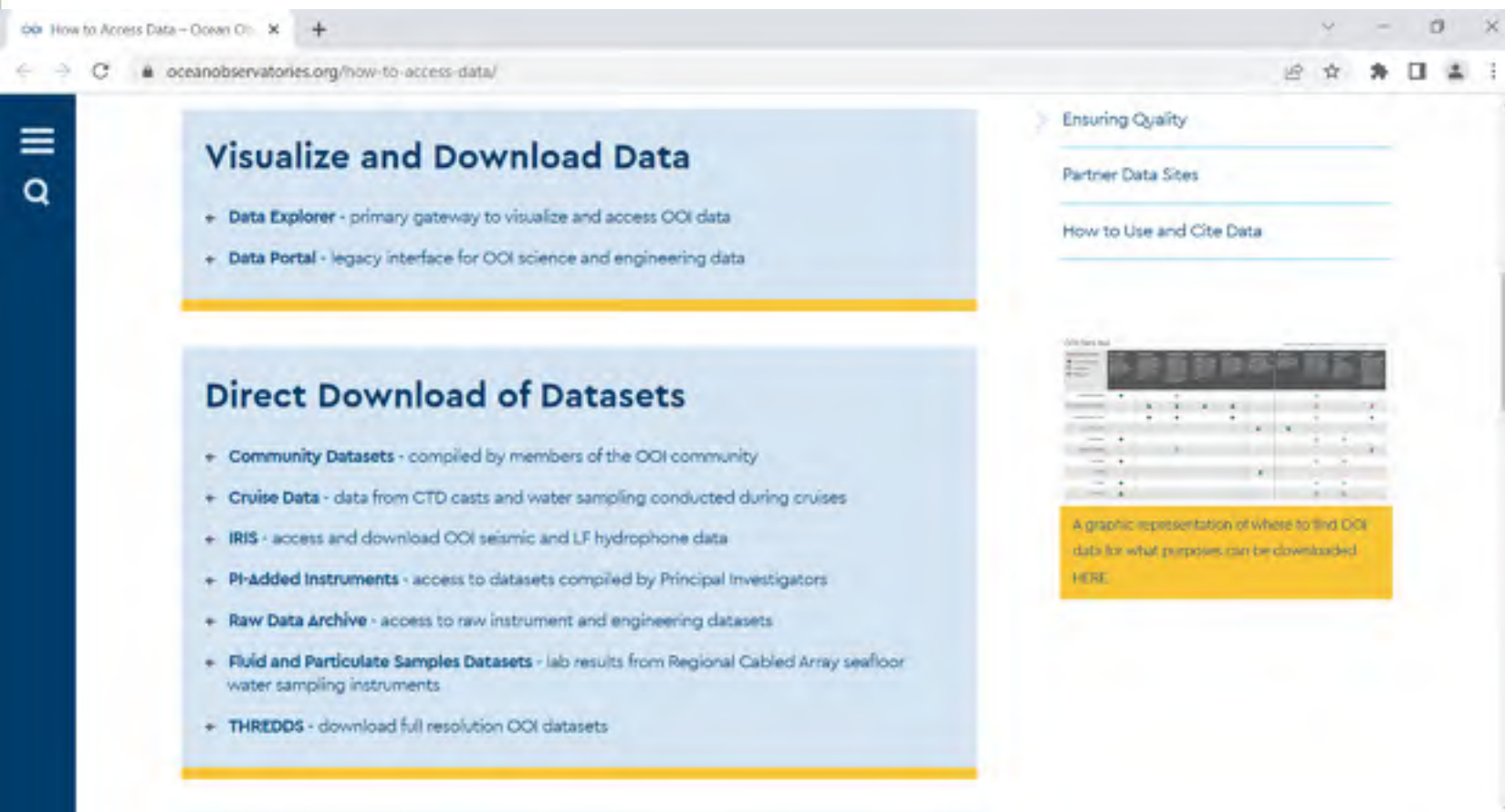


## OOI data collection sites

- Mooring time-series
- Glider transect data
- AUV transect data



# OOI data readily available at a variety of formats



The screenshot shows the 'How to Access Data' page on the oceanobservatories.org website. The page is divided into two main sections: 'Visualize and Download Data' and 'Direct Download of Datasets'. The 'Visualize and Download Data' section includes links to 'Data Explorer' (primary gateway) and 'Data Portal' (legacy interface). The 'Direct Download of Datasets' section lists several data sources: 'Community Datasets', 'Cruise Data', 'IRIS', 'PI-Added Instruments', 'Raw Data Archive', 'Fluid and Particulate Samples Datasets', and 'THREDDS'. On the right side, there are links for 'Ensuring Quality', 'Partner Data Sites', and 'How to Use and Cite Data'. A small table titled 'Data Types' is also visible, showing various data types and their availability. A yellow box at the bottom right of the screenshot contains the text: 'A graphic representation of where to find OOI data for what purposes can be downloaded HERE.'

From: [oceanobservatories.org/how-to-access-data/](https://oceanobservatories.org/how-to-access-data/)

For Questions:  
[help@oceanobservatories.org](mailto:help@oceanobservatories.org)



Coastal Profiler Mooring (CPM)  
from: Plueddeman et al., 2022



# Coastlines and People (CoPe)



Funding & Awards | News & Events | Science Topics | About NSF

Home / News / NSF announces new awards to understand coastal systems and tackle coastal hazards



NSF Award

## NSF announces new awards to understand coastal systems and tackle coastal hazards

August 24, 2023

U.S. coastlines are heavily populated areas with critical public resources, such as housing, transportation infrastructure, freshwater supplies, and electricity generation and distribution facilities. These coastlines are also increasingly vulnerable to extreme weather events, sea-level coastal flooding, algal blooms and tectonic hazards.

Research is needed to understand complex coastal systems and their interplay with natural human populations and the built environment. The U.S. National Science Foundation's Coast and People, or CoPe, program has announced \$51 million in new awards to protect the natural social and economic resources of U.S. coasts, and to help create more resilient coastal communities.

The results of CoPe research and engagement activities will have positive impacts at local, regional, national and global levels. The CoPe program is one of five NSF-endorsed actions for the United Nations Decade of Ocean Science for Sustainable Development. Participation in the U.N. Ocean Decade helps NSF-funded projects share research, ideas, methodologies and approaches, and allows for engagement in global actions needed to advance coastal and ocean science and technology.

Learn more about the [CoPe program](#), and find a [list of the new awards](#).

### Research areas

- [Directorate for Geosciences \(GEO\)](#)
- [Directorate for Biological Sciences \(BIO\)](#)
- [Directorate for Engineering \(ENG\)](#)
- [Directorate for Social, Behavioral and Economic Sciences \(SBE\)](#)
- [Directorate for Education and Human Resources \(EHR\)](#)
- [Office of Integrative Activities \(OD/OIA\)](#)

### Topics

Earth & Environment

People & Society

DIVISION OF  
Ocean Sciences



# The National Science Foundation (NSF)

- NSF evaluates proposals submitted to open, competitive research calls using two **merit review criteria**:
  - The **Intellectual Merit** criterion encompasses the potential to advance knowledge
  - The **Broader Impacts** criterion encompasses the potential to benefit society and contribute to the achievement of specific, desired societal outcomes



# Broader impacts – a non-exclusive list:

- full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM);
- improved STEM education and educator development at any level;
- increased public scientific literacy and public engagement with science and technology;
- improved well-being of individuals in society;
- development of a diverse, globally competitive STEM workforce;
- increased partnerships between academia, industry, and others;
- improved national security;
- increased economic competitiveness of the United States; and
- enhanced infrastructure for research and education.

# Proposal Preparation Resources

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- Proposal and Award Policies and Procedures Guide (PAPPG) - describes required elements and format for NSF proposals\*
  - Note this is updated almost every year; watch for changes
- Program Announcements – may have information on eligibility, goals, special requirements
  - Related: make sure you understand data policies
- Program Officers – current; also former rotators



# ***Proposals to NSF OCE – key points***

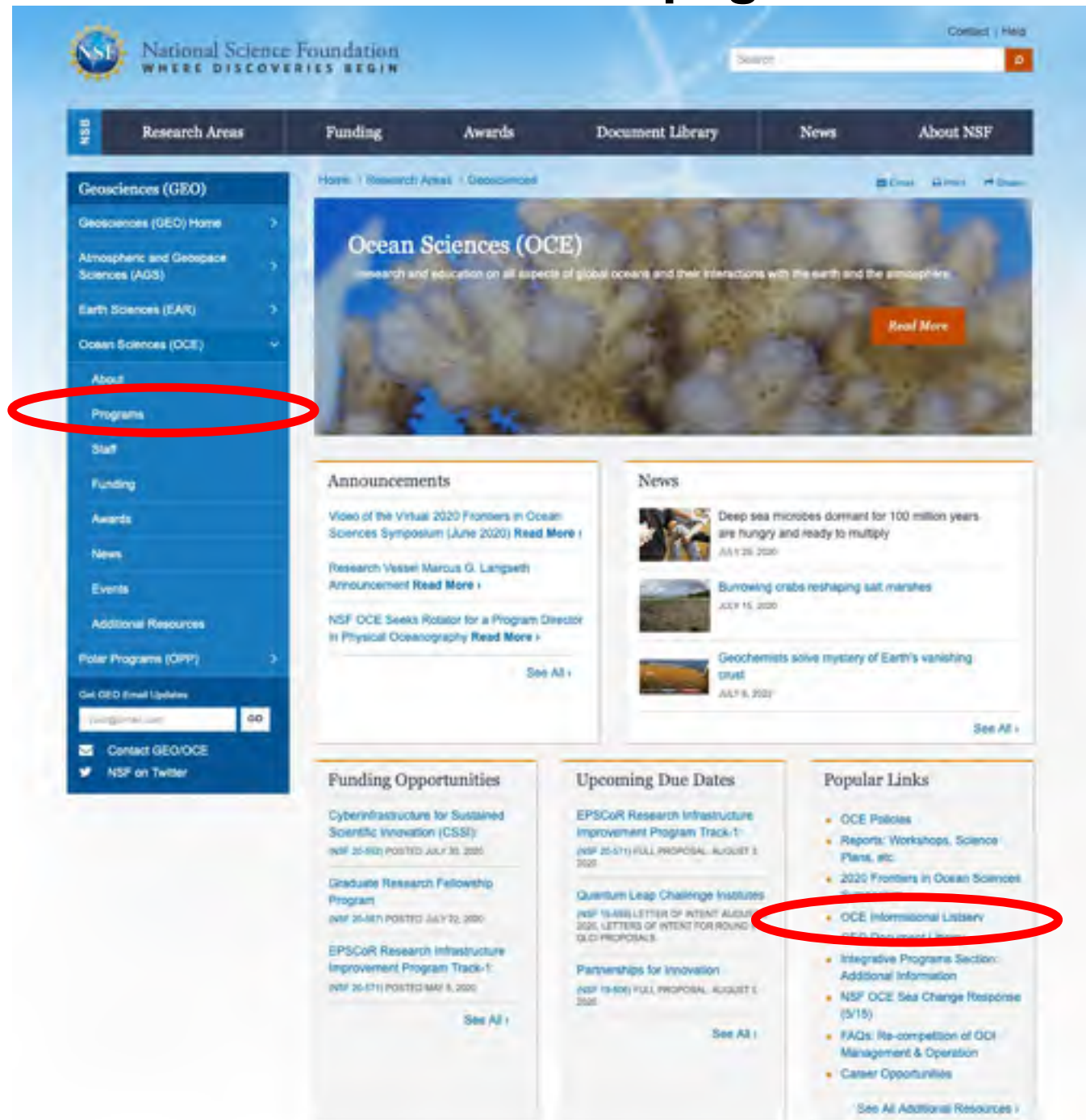
- Core OCE science programs (PO, CO, BO, MGG) use a combination of mail and panel review
  - OTIC uses mail review only
- Proposal submission dates
  - MGG and BO accept proposal submissions at any time
  - CO and PO still have two target dates per year: February 15 and August 15
  - OTIC has one target date per year: February 15
- We co-review proposals all the time – between OCE programs, and with programs in other parts of NSF
  - If you have any questions about the fit of your proposal to a program or programs, contact one of us!
- For proposals with ship time: include a ship time request ([www.unols.org](http://www.unols.org)) as a supplementary document in your proposal
- CAREER in OCE
  - The Ocean Education Program co-reviews all OCE CAREER proposals, and co-funds the awards. The Education component is important!

# More information: the OCE home page

Search Engine or NSF  
Research areas  
Geosciences Ocean  
Sciences:

Sign up to receive  
emails from OCE

Next slide – (parts of)  
what an individual  
program page looks like





## Program Contacts

Baris M. Uz	<a href="mailto:bmuuz@nsf.gov">bmuuz@nsf.gov</a>	(703) 292-4557	GEO/OCE
Sean C. Kennan	<a href="mailto:skennan@nsf.gov">skennan@nsf.gov</a>	(703) 292-7575	GEO/OCE
Dana K. Savidge	<a href="mailto:dsavidge@nsf.gov">dsavidge@nsf.gov</a>	(703) 292-4897	GEO/OCE
Arnoldo Valle-Levinson	<a href="mailto:avallete@nsf.gov">avallete@nsf.gov</a>	(703) 292-7946	GEO/OCE
Hana Busse	<a href="mailto:hbusse@nsf.gov">hbusse@nsf.gov</a>	(703) 292-7596	GEO/OCE

## Awards Made Through This Program

[Browse projects funded by this program](#)

## Guidelines And Due Dates

### Synopsis

The Physical Oceanography Program supports research on a wide range of topics associated with the structure and movement of the ocean, with the way in which it transports various quantities, with the way the ocean's physical structure interacts with the biological and chemical processes within it, and with interactions between the ocean and the atmosphere, solid earth and ice that surround it.

## Updates and Announcements

## Program Officers and contact information

### Upcoming Due Dates

#### Full Proposal

2022

**February 15** - Target Date

☑ February 15, Annually Thereafter

**August 15** - Target Date

☑ August 15, Annually Thereafter

## Program Synopsis and examples of research supported



# International Proposals

- NSF awards are made to US **institutions** with very rare exceptions.
- Institutions decide who can serve as a PI or receive pay from a grant within federal regulations and institutional policies.
- Some mechanisms exist with certain countries to fund joint projects
  - With UK (review either at NSF or UKRI for up to \$500K)
  - With Israel (review at NSF only)
  - With Ireland and Northern Ireland (trilateral projects, NSF review)
  - With the Czech Republic (review at NSF)
- For other countries or larger projects, parallel proposals can be submitted to NSF and the other country and decisions are then made jointly.
- Other opportunities for minor collaboration (e.g. supplements to NSF-funded PIs to visit and collaborate with colleagues in EU).





# New Directorate: Technology, Innovation and Partnerships (TIP)



Credit: National Science Foundation

## TIP's mission

The Directorate for Technology, Innovation and Partnerships, TIP, harnesses the nation's vast and diverse talent pool to advance critical and emerging technologies, address pressing societal and economic challenges, and accelerate the translation of research results from lab to market and society. TIP improves U.S. competitiveness, growing the U.S. economy and training a diverse workforce for future, high-wage jobs.

- First new directorate in decades (from 7 to 8)
- Focused on applied science (or solution space)
- Expected to take up most of the budget growth in the near future
- Will likely experiment with new review and funding mechanisms
- Much left TBD about how to engage with TIP