

# *Arctic Icebreaker Coordination Committee*

## *NSF Arctic Research Support & Logistics*

**NSF Program Manager: Dr. Frank R. Rack**  
**Tel: (703) 292-2678; Email: [frack@nsf.gov](mailto:frack@nsf.gov)**  
**(responsible for RSL projects in Alaska & on vessels)**

U. S. Coast Guard Station, Rainer Room  
Alaskan Way, Pier 36, Seattle, WA  
January 15-16, 2020

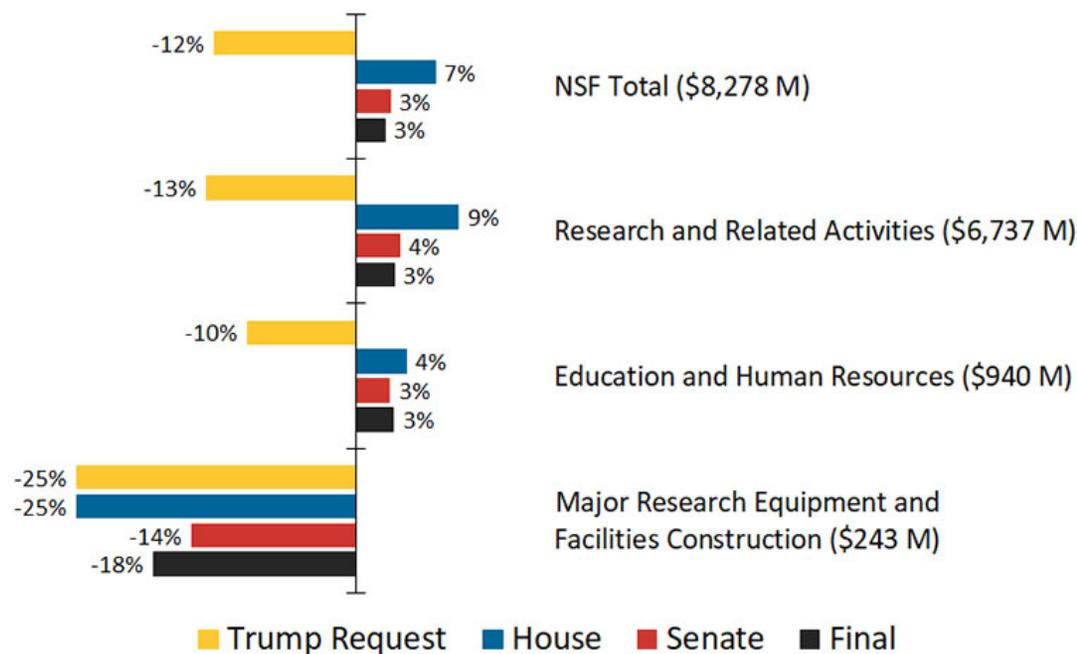


# NSF Budget

The Consolidated Appropriations Act of 2020 was signed into law on December 20, 2020 [Public Law No: 116-93]. The National Science Foundation's budget was increased by 2.5% to nearly \$8.3 billion.

## FY20 Appropriations: National Science Foundation

\$ in ( ) are the FY20 amounts



## **STARC (Ship-based Technical Support in the Arctic: Augmenting Science Support on the USCGC Healy)**

The two primary functions of the STARC Program are:

- (1) to plan, coordinate, and deliver science technical support onboard Healy, augmenting the role of the USCG marine science technicians; and,
- (2) to coordinate with NSF, USCG, and the academic community to provide for the operation, maintenance and upgrade of science equipment installed or used on Healy.

The NSF/OPP Arctic Research Support & Logistics (RSL) Program has requested that the STARC incumbent organizations prepare a sole source proposal covering 2-years (2020-2021). This will be sent out for peer review.



# NSF-funded Vessel Activities in the Arctic in 2020

**MOSAiC Expedition** (multiple awards) – German Icebreaker **Polarstern** and support vessels – through October 14, 2020 (awards shown on next slide)

**Status:** **MOSAiC Leg 1** was completed on December 13-18, 2019; with personnel exchange and handover to **MOSAiC Leg 2** following departure of Russian icebreaker **Kapitan Dranitsyn**, which returned the Leg 1 participants to Tromsø, Norway by January 3, 2020. MOSAiC Leg 2 participants are continuing with observations and time series measurements initiated on Leg 1.

The **MOSAiC Leg 3** team will depart on the Russian icebreaker **Kapitan Dranitsyn** from Tromsø, Norway on January 27, 2020, following loading and safety briefings and will travel to the drift position of the Polarstern by mid-February 2020 to exchange crews and return the **MOSAiC Leg 2** participants to Tromsø, Norway by March 5, 2020.

The **MOSAiC Leg 3/Leg 4** exchanges are expected to take place in early April 2020, following construction of a sea-ice runway, using fixed wing aircraft departing and returning to Longyearbyen. The Swedish icebreaker Oden will support the exchanges between **MOSAiC Leg 4/Leg 5** and the Chinese icebreaker XueLong will support exchanges between **MOSAiC Leg 5/Leg 6**.



# NSF Awards (Discipline, Award #, PI, Institution)

## ATMOSPHERE

- 1724551 – Shupe (UC-Boulder)
- 1807496 – Blomquist (UC-Boulder)
- 1914781 – Helmig (UC-Boulder)
- 1807163 – Archer (Bigelow Lab)
- 1852614 – Welker (UA-Anchorage)
- 1753423 – Kadko (FIU)/**BGC**
- 1753418 – Buck (UGA/Skidaway)/**BGC**
- 1753408 – Landing (FSU)/**BGC**
- 1805569 – de Boer (UC-Boulder)/**RS**

## BIOGEOCHEMICAL CYCLES

- 1821911 – Bowman (UCSD/SIO)
- 1821900 – Loose (URI)

## OCEAN

- 1723400 – Stanton (SJSU/MLML)

For more info, use “NSF Award Search”  
at: <https://www.nsf.gov/search/>

## SEA ICE / SNOW

- 1724424 – Perovich (Dartmouth)
- 1724540 – Perovich (Dartmouth)
- 1722729 – Hutchings (Oregon State)
- 1724467 – Light (U of Washington)
- 1820927 – Liston (CSU)/**MODELING**
- 1735862 – Rember (UA-Fairbanks)/**ECO**

## MODELING (SEA ICE)

- 1724748 – Holland (UCAR)

## ECOSYSTEM

- 1824447 – Ashjian (WHOI)
- 1824414 – Campbell (URI)

## REMOTE SENSING

- 1838401 – Johnson (Ohio State)

## COORDINATION OFFICE (E&O)

- 1839104 – Shupe (UC-Boulder)



# NSF-funded Vessel Activities in the Arctic in 2020

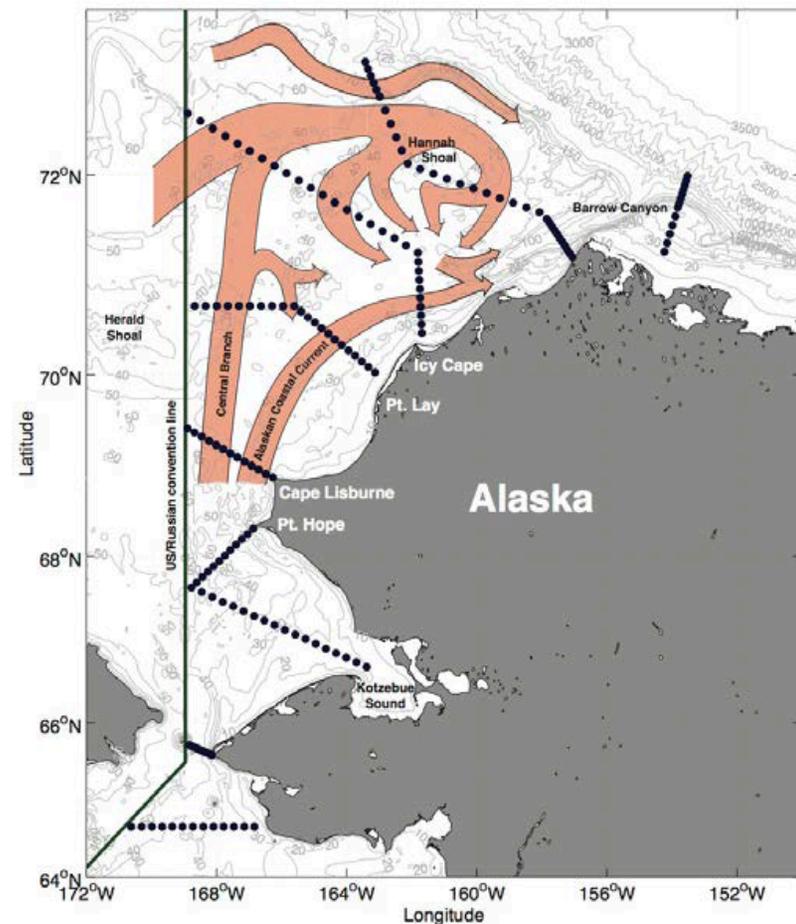


## USCGC Healy

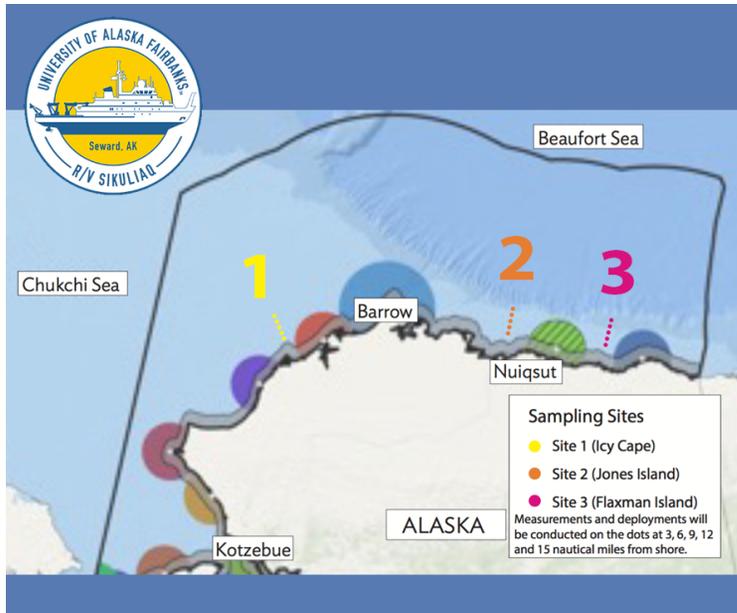
**HLY20-01 (NSF funding) – Harmful Algal Blooms – Anderson (WHOI, PI)**

Donald Anderson / Robert S. Pickart  
(1823002) - Origin and Fate of Harmful Algal Blooms in the Warming Chukchi Sea.

A joint physical-biological field program to study the relationship between HAB species distribution/dynamics and the physical environment of the Chukchi Sea region



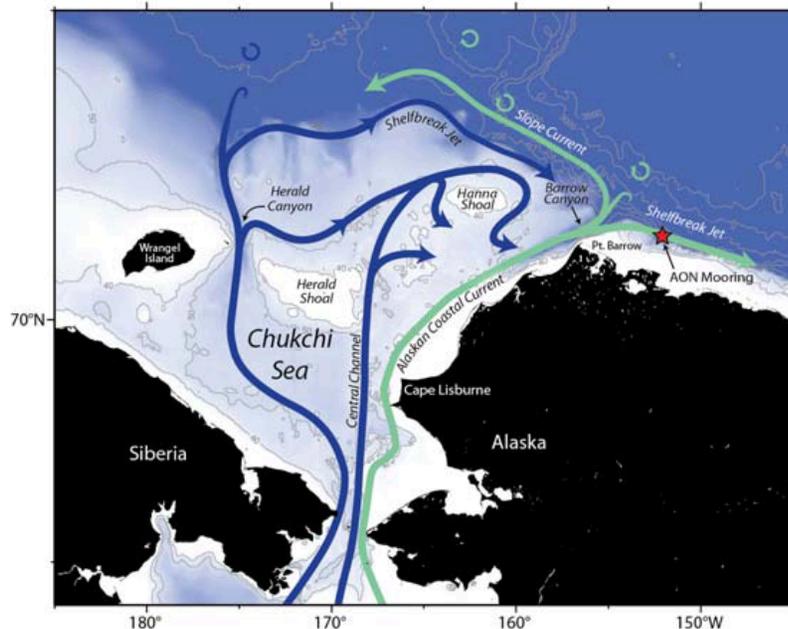
# NSF-funded Vessel Activities in the Arctic in 2020



## R/V Sikuliaq

**Thomson (1818485)** – CODA (Coastal Ocean Dynamics in the Arctic)

The CODA goals are to observe the interactions of sea ice with winds and waves along the coast of northern Alaska.



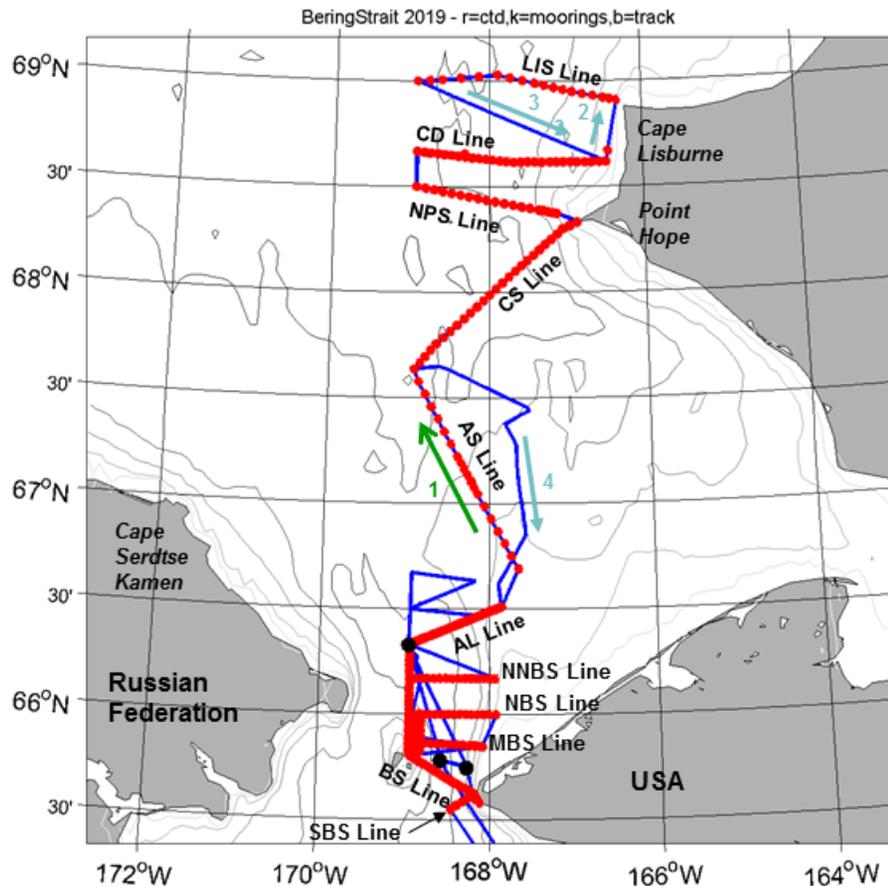
**Pickart (1733564)** - Monitoring the western Arctic boundary current in a warming climate: Atmospheric Forcing and Oceanographic Response.

Bi-annually service (deploy or turnaround or recover) a subsurface mooring on the Alaskan Beaufort shelf at 152W and do a hydrographic survey of the boundary current.



# NSF-funded Vessel Activities in the Arctic in 2020

**Woodgate** (1758565) – NSF-OPP-AON – Bering Strait 2018-2022: Quantifying the changing Pacific inflow to the Arctic Ocean- a critical component of the Arctic Observing Network.



<http://www.supportvesselsofalaska.com/>

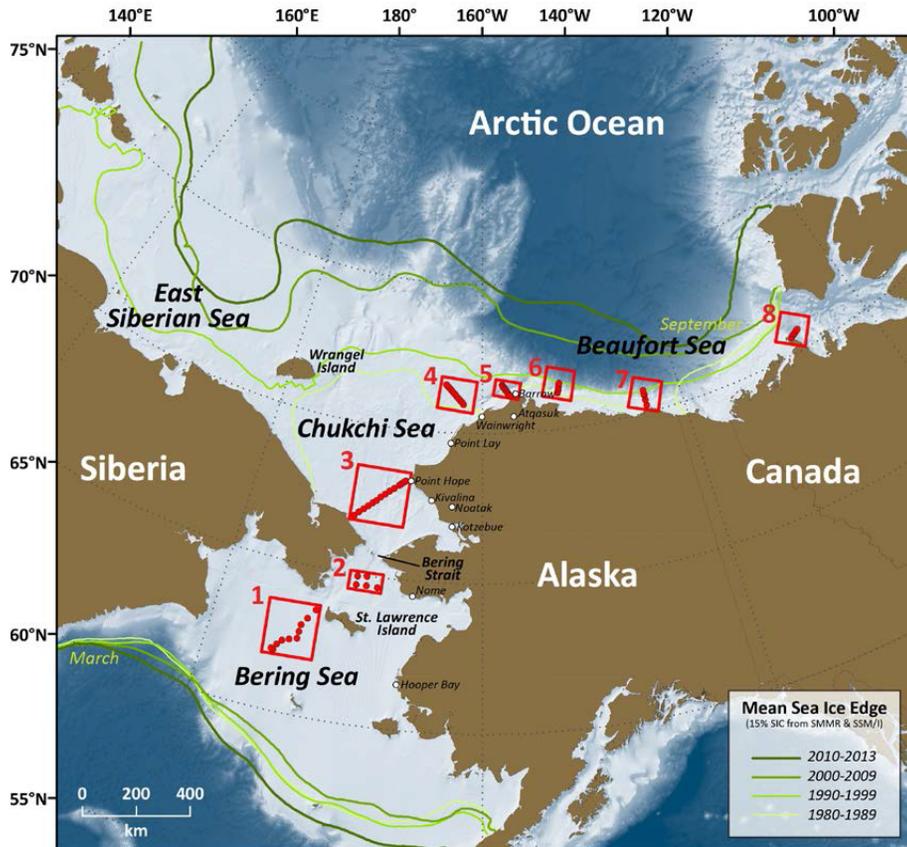
<http://psc.apl.washington.edu/HLD/Bstrait/NorsemanII2019Cruise.html>



# NSF-funded Vessel Activities in the Arctic in 2020

## CCGS Sir Wilfrid Laurier

Grebmeier (UMD/CES, PI) – NSF-OPP-AON funding – (1917469) – Collaborative Research: The Distributed Biological Observatory (DBO) – A Change Detection Array in the Pacific Arctic Region.



# Working with Indigenous Communities

- Support researcher engagement efforts in Arctic communities
  - Prior to the fieldwork to communicate project information
  - Following fieldwork to report back results
- Hire local people where feasible
- Provide polar bear guards, translators, and other field support staff from local communities
- Follow the Principles for the Conduct of Research in the Arctic



Photo by Qaiyaan Harcharek, Iñupiaq harpooner, whaler, anthropologist, Utqiagvik, Alaska



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## *QUESTIONS?*

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