ARP and EcoFOCI Cruises

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Cruise 1

Dates: 16 September - 8 October 2022

Departs from: Dutch Harbor, AK

Returns to: Kodiak, AK

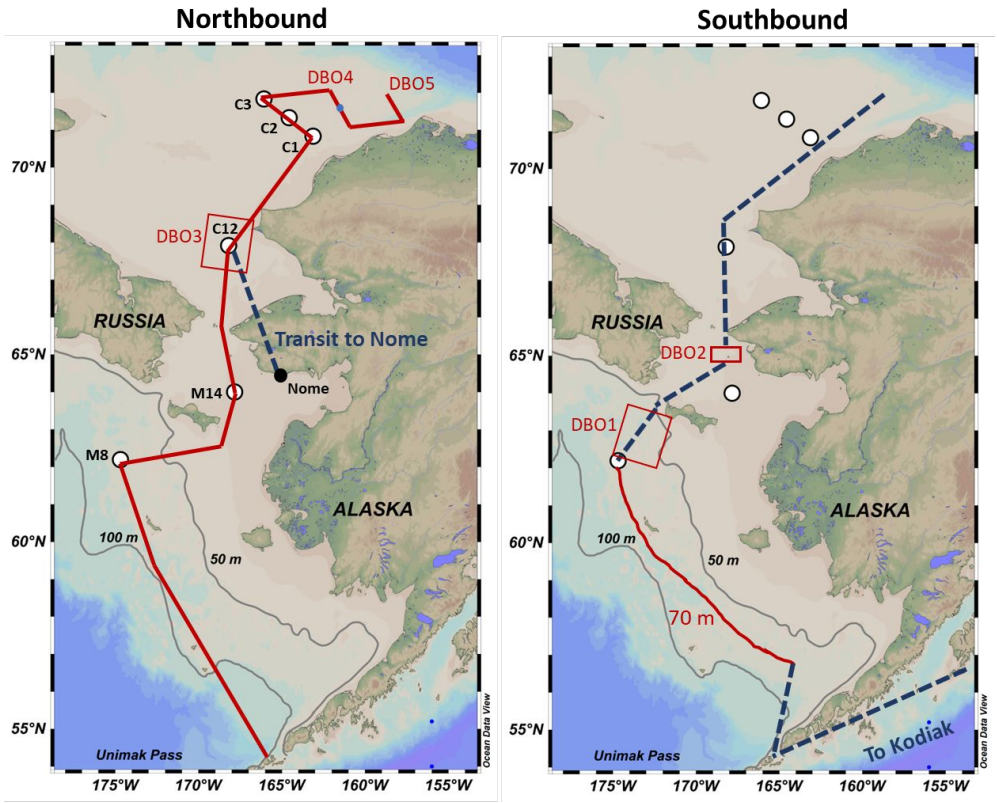
Research Area Location: Bering & Chukchi Seas

Vessel: *NOAA ship Oscar Dyson*

Research website: www.ecofoci.noaa.gov/

Project supported by: NOAA (EcoFOCI and ARP)

Contact information: phyllis.stabeno@noaa.gov



Contact Us: <Phyllis Stabeno>, <PMEL>, <phyllis.stabeno@noaa.gov>

Cruise 2

Dates: TBD (likely 13 days)

Departs from: Kodiak, AK

Returns to: Dutch Harbor, AK

Research Area Location: Bering Sea

Vessel: *Aquila*

Research website: www.ecofoci.noaa.gov/

Project supported by: NOAA (EcoFOCI and ARP)

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Key Scientific Questions & Motivations

Mission: to understand the dynamic relationships among climate, fisheries, and the marine environment to ensure sustainability of Alaskan living marine resources and healthy ecosystems.

Goals:

- To improve understanding of mechanisms that link environmental changes to high-latitude marine ecosystems
- Continue to operate an array of moorings in the Bering and Chukchi Seas, NOAA's only biophysical observation network in the Arctic.
- Complete ship-based fall mooring/Arctic cruise to the Bering and Chukchi Seas, maintaining moorings and observing annual hydrographic surveys of water column properties in DBO regions
- Testing new technologies (RISE, pop up floats)

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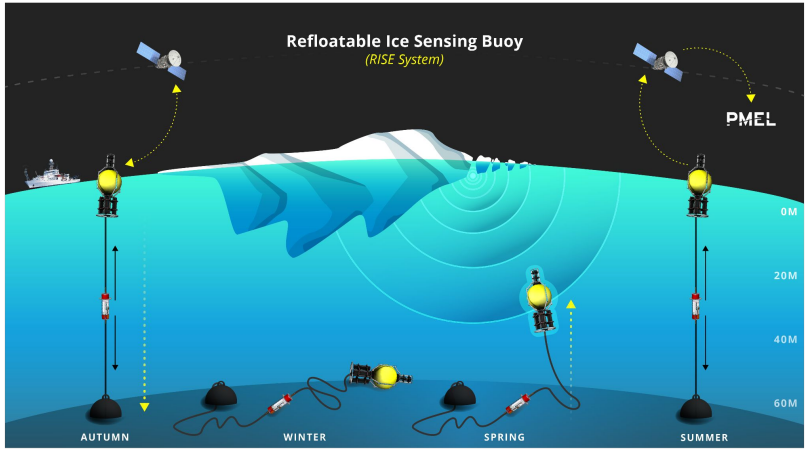
Key Activities & Data to be collected

- **Core Ship-based sampling:**
  - Temperature, salinity, currents, chlorophyll, nutrients, eDNA
  - Zooplankton (composition, size, biomass)
  - Seabird and marine mammal observations
  - Fishery acoustics
  - Phytoplankton and Zooplankton sampling
- **Moored time series**
  - Biophysical (T, S, nutrients, fluorescence, currents, oxygen, etc.)
  - Sediment trap
  - Marine mammal passive acoustics
  - eDNA
- **Innovative Technology**
  - Refloatable Ice SEnsing (RISE) moorings
  - Pop-up floats to make under-ice observations
  - ALAMO profiling floats
  - Zooplankton and phytoplankton imagery
  - In situ incubation
- **DBO lines (DBO1-DBO5): zooplankton and CTDs**



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IARPC Field Operations Working Group
https://www.iarpccollaborations.org/research-expeditions.html

- Co-Chaired by Renee Crain, NSF, and David Allen, NOAA. Supported by Cynthia Garcia, NOAA and IARPC Secretariat
- Arctic Marine Research Spreadsheet
- Pre- and Post-Field Season Meetings for the broader community