

# 6<sup>th</sup> DBO Data Workshop Agenda Dec 7-8, 2022 Victoria, BC, Canada

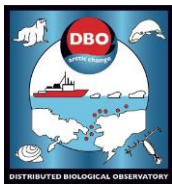
<https://dbo.cbl.umces.edu/>

**Jackie M. Grebmeier**

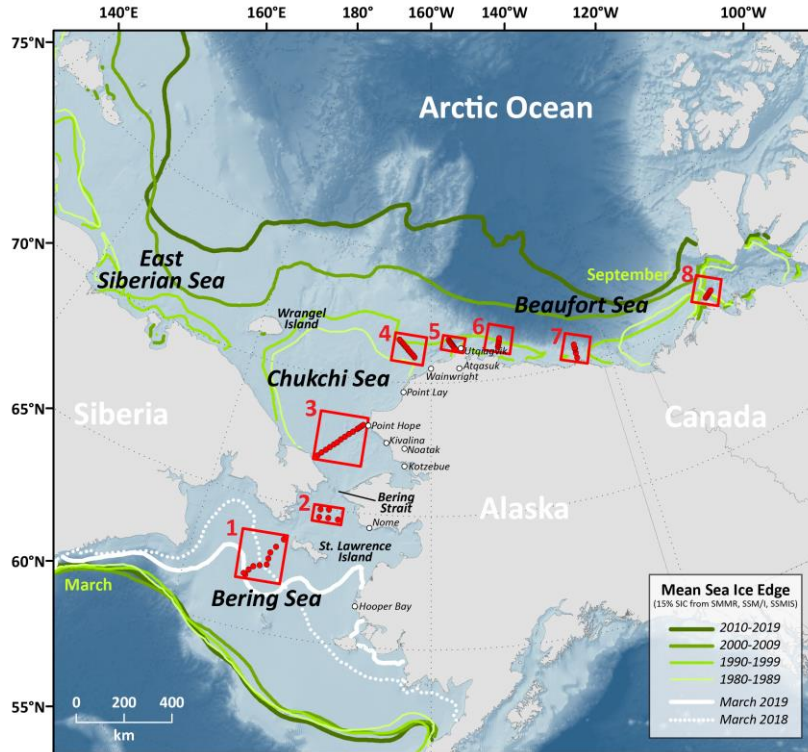
Chesapeake Biological Laboratory, University of Maryland Center for Environmental Science,  
Solomons, MD, USA; [jgrebmei@umces.edu](mailto:jgrebmei@umces.edu)

**Note:** this is a hybrid meeting for virtual participation via Zoom connection at the following link:  
(<https://us02web.zoom.us/j/81996838458?pwd=WWZ4a25VUUUcyanBISnNvbHYzeXQ4dz09>)





# The Distributed Biological Observatory (DBO): Linking Physics to Biology



[updated from Grebmeier et al. 2019, DBO DSR Special Issue 162:1-7]

## ➤ Core Ship-based sampling:

- CTD and ADCP
- Chlorophyll, nutrients, carbon products
- Plankton (size, biomass and composition)
- Benthos (size, biomass and composition & sediment parameters)
- Seabird and marine mammal surveys
- Fishery acoustics
- Bottom trawling (every 3-5 years)

## ➤ Autonomous sensor sampling:

- Gliders, moorings, saildrone
- Satellite observations

## ➤ DBO lines also embedded in process cruises

- DBO sites (red boxes) are regional “hotspot” transect lines and stations, based on high productivity, biodiversity, and/or overall rates of change
- DBO serves as a change detection array for consistent monitoring of biophysical responses
- Sites occupied by national and international entities with shared data plan



0900 **Welcome and Logistics:** Bill Williams, IOS/DFO

0910 **Meeting Objectives and Brief Overview of the DBO:** Jackie Grebmeier

0920 **Highlights of DBO 2010-2022 data time series** (~5-7 min presentations, followed by questions, up to 10 min time slot (**BOLD is session lead**))

- **Autonomous Sampling and Remote Sensing (Jackie Grebmeier)**
  - Clare Ostle (*Britain, virtual, need 0920 PST=17:20 London time*): “Using the Continuous Plankton Recorder to detect and monitor the spread of potential Harmful Algal Blooms from the Pacific into the Arctic Ocean”
  - Karen Frey: “Update on satellite time series of sea ice and primary production”
  - Mike Steele: “2022 Sailables and DBO collaboration”
  
- **Physical Oceanography/Moorings and Hydrography (Bill Williams)**
  - Phyllis Stabeno: “Update on the EcoFOCI moorings” (*virtual, PST*)
  - Robert Pickart: “Distinguishing the flow branches in the Chukchi Sea using DBO repeat sections”
  - Motoyo Itoh: “Japanese activities for DBO: physical oceanography and moorings”
  - Jackie Clement Kinney: “On the variability of the Bering Sea Cold Pool and implications for the biophysical environment” (*virtual, 1020 PST*)

10:30 **Coffee Break**

10:50 **Highlight Presentation (cont.)**

- **Hydrography, Moorings and Lower Trophic Levels (Lee Cooper)**
  - Rebecca Woodgate: “Update on the Bering Strait moorings” (*virtual, 1050 or TBD PST*)
  - Lee Cooper: “Time series water column data during annual SWL DBO cruises”
  - Jessica Cross: “Carbon biogeochemistry and ocean acidification in the Pacific Arctic”
  - Clare Gaffey: “Phytoplankton bloom stages estimated from chlorophyll pigment proportions suggest delayed summer production in low sea ice years in the northern Bering Sea”
  - Shea Wyatt: “Primary production and silica cycling in the Pacific Arctic”
  - Rebecca Crawford: “Biodiversity of phytoplankton and fungi in Arctic and Subarctic oceans”
  - Carin Ashjian: “Fifteen years of physical and biological (zooplankton) characteristics near Pt. Barrow, AK”

1200 **Lunch (on own)**





**1440 Synthesis Projects and Strategic Planning Updates, Data Archiving (10 min ea)**

- Paul Berkman: “Arctic Satellite Knowledge (ASK): Integrating Maritime Ship Traffic” (*virtual, 1740 EST*)
- Libby Logerwell: “Synthesis projects in the Northern Bering-Chukchi Sea led by Alaska Fisheries Science Center” (*virtual, 1450 PST*)
- Christina Goethel/Lee Cooper: “Update on the UN Decade for Ocean Science for Sustainable Development-Arctic Action Plan” (1500 PST)
- Sandy Starkweather: “Update on the ROADS process” (*virtual, 1510 PST 1610 CST*)
- Shige Nishino: “DARWIN and ADS Data Archiving” (*virtual, 1520 PST=0820 Tokyo, Dec 9*)

**1530 Coffee break**

**1600 Publication activities**

- 2<sup>nd</sup> DBO PLOS issue and future publications (Jackie Grebmeier)
- JGR special issue (Motoyo Itoh)

**1615: Upcoming DBO-relevant presentations and discussions**

- January 2023: Alaska Marine Science Symposium (*hybrid*)
- February 2023: ASSW23 in Vienna, Austria (registration open)
  - Mon. Feb 20: “Distributed Biological Observatory (DBO) community meeting” (1030-1800 CET, *hybrid*)
  - Tues. Feb 21: Session #11: “Integrating knowledge from regional marine observatories to pan-Arctic perspectives” (with DBO talks; 1400-1800 CET-*hybrid*)
- March 2023: ISAR7, Tokyo, Japan: SAS and Marine Ecosystem sessions
- November 7-9, 2023: Nansen Legacy symposium in Tromsø, Norway; more details here: <https://www.nansenlegacy-symposium.com/>

**1630 Action Items & Timeline: future plans, open discussions**

**1700 End of DBO workshop**