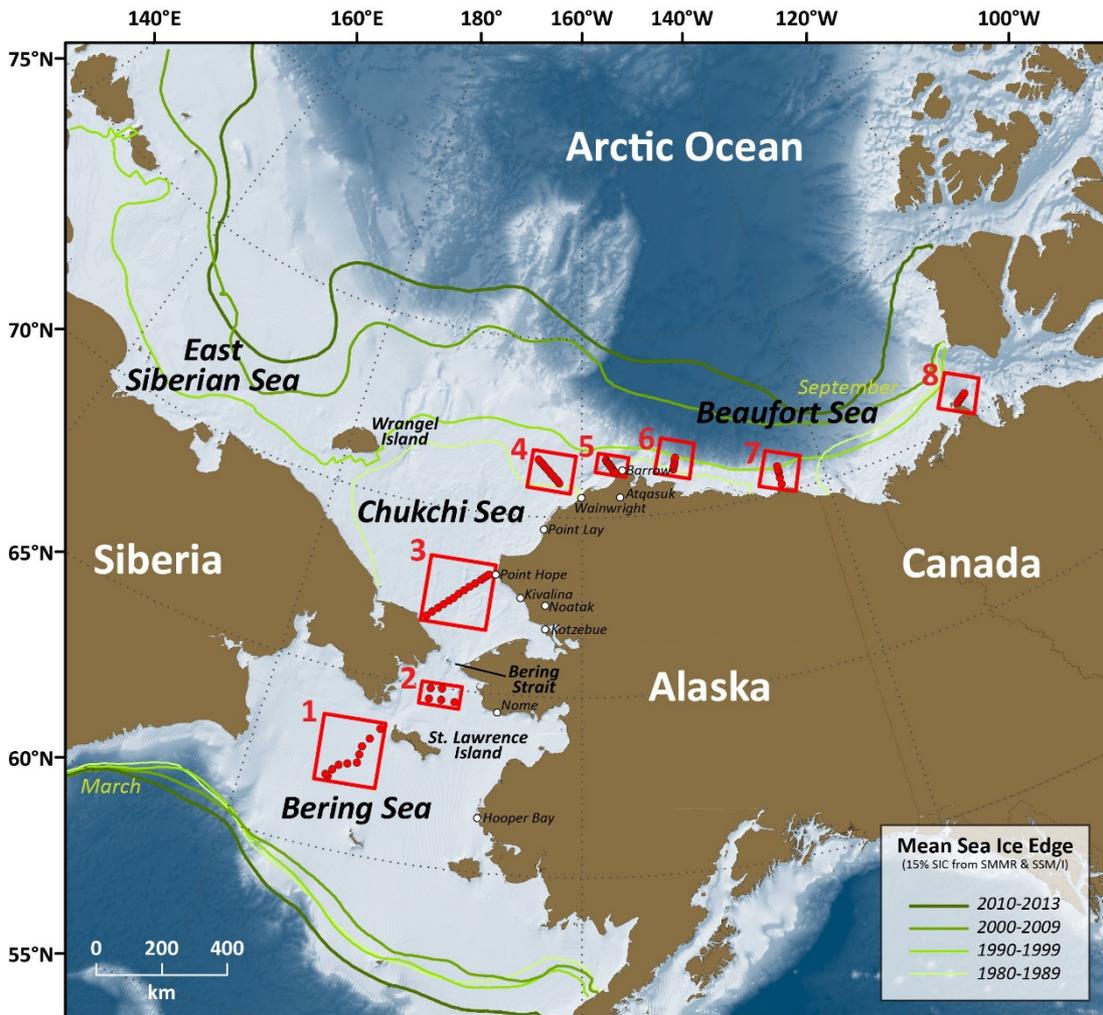


# Distributed Biological Observatory (DBO)

<http://www.pmel.noaa.gov/dbo/>



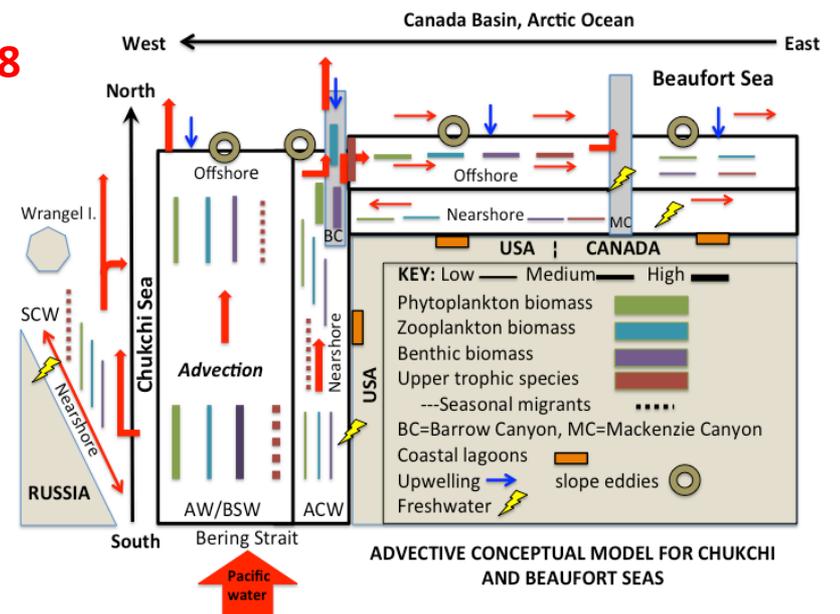
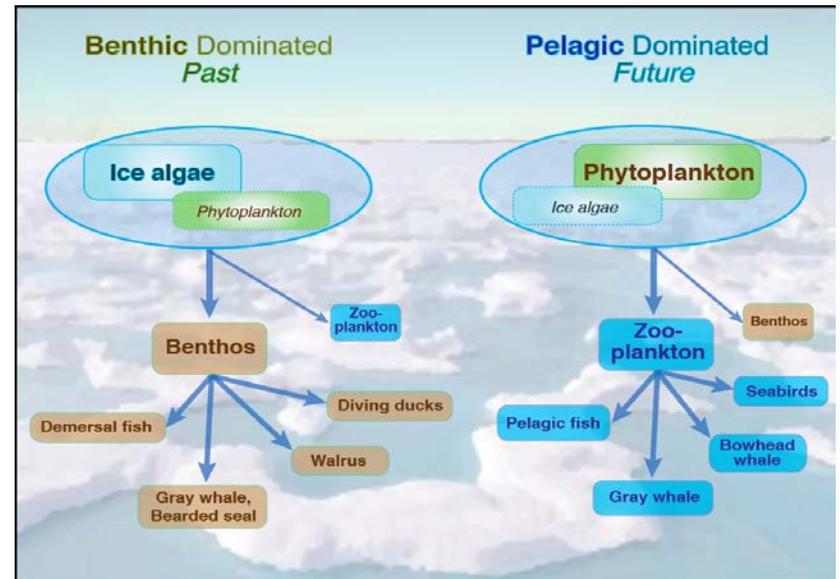
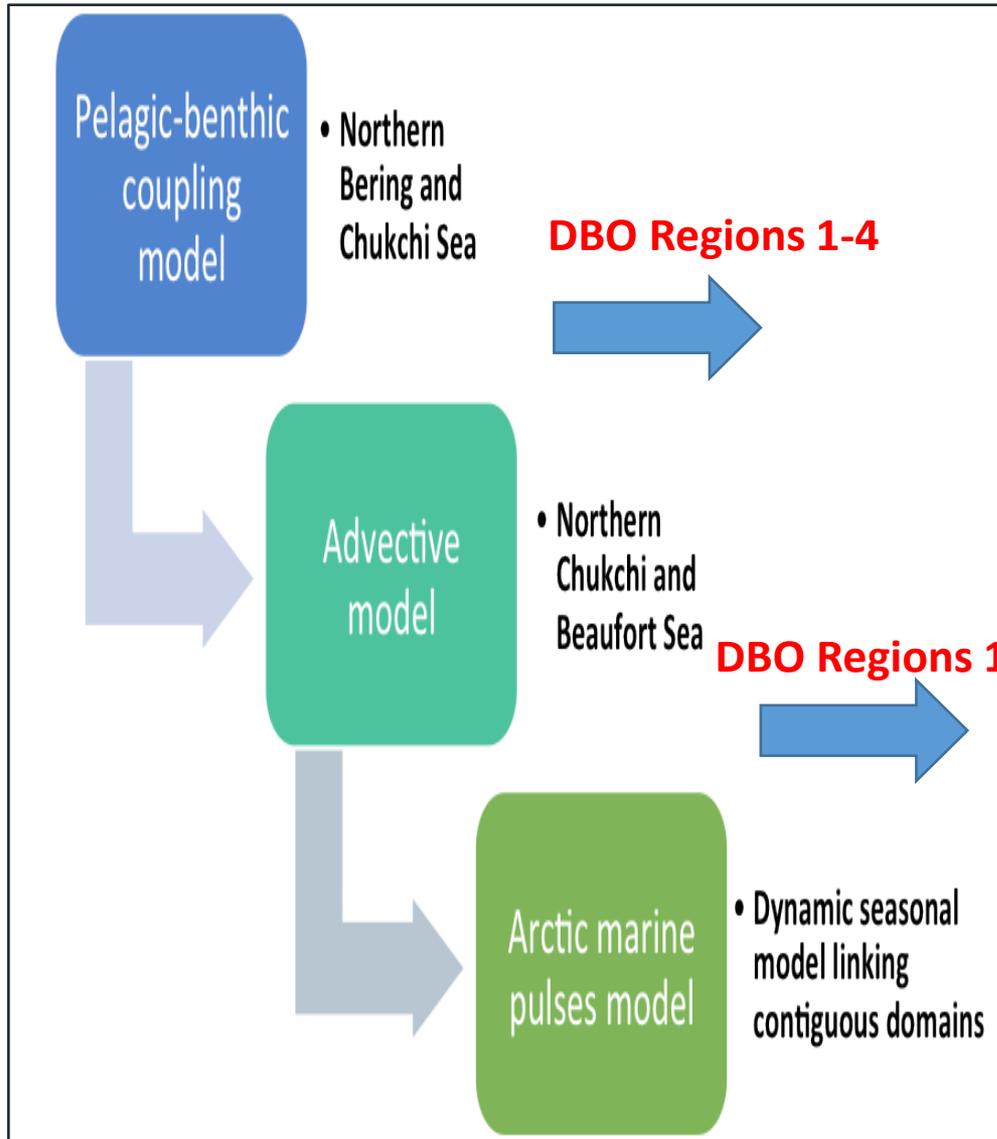
[modified by Karen Frey from Grebmeier et al. 2010, EOS 91]

- **Eight** DBO Regions
- **DBO 1-4:** continental shelf
- **DBO 5-8:** outer continental shelf, slope, basin & canyon
- **All regions are focused on areas of high productivity**
- **All regions are within the seasonal ice zone domain**

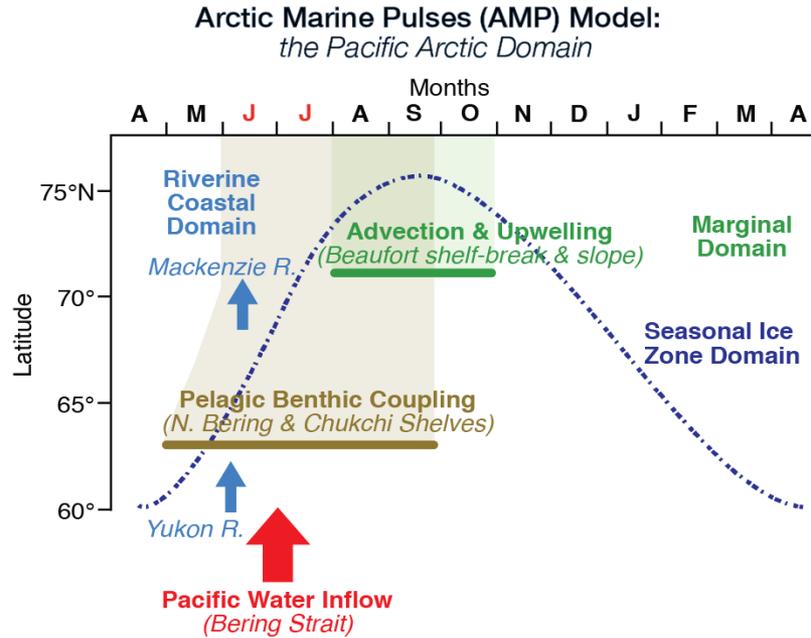


# Building the AMP Conceptual Model

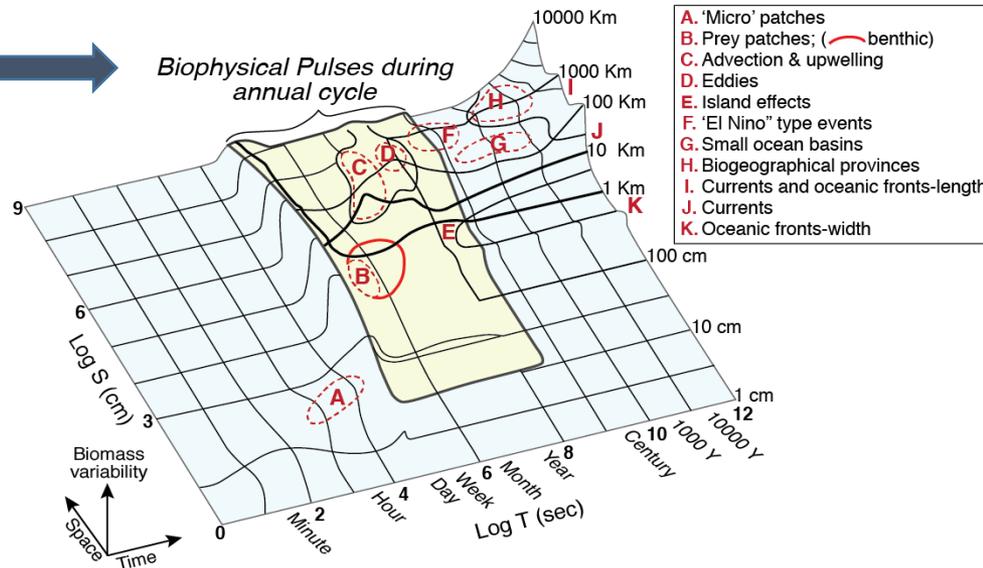
Moore and Stabeno 2015; Grebmeier et al. 2015/PACMARS



# THE ARCTIC MARINE PULSES (AMP) CONCEPTUAL MODEL



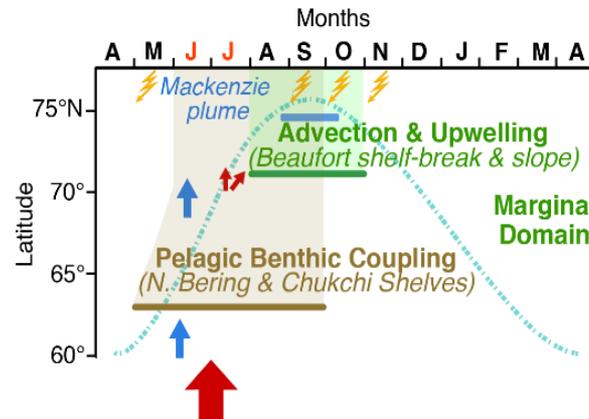
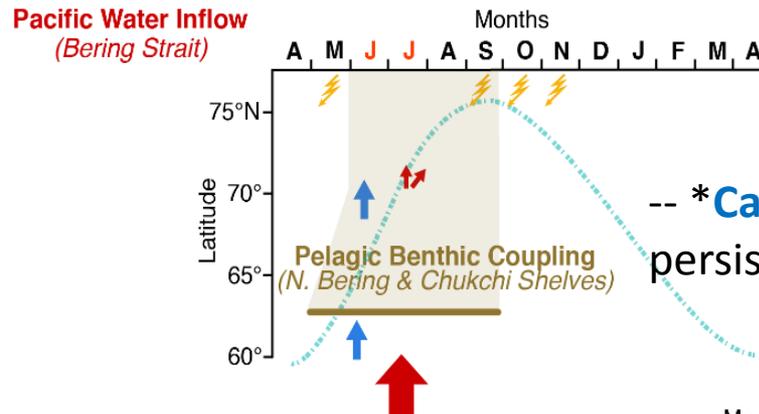
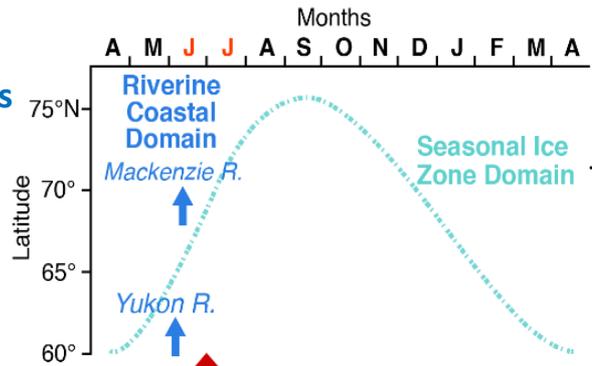
## Oceanographic Processes



# AMP Model Components

## \*next steps

\*Muyin Wang – Satellite observations, 25 km resolution



\*may not include RCD component: DBO regions not influenced by rivers, except DBO 7?

\*Wei Cheng & Al Hermann – ROMS simulation

-- \*Carin Ashjian? - NSF/Hotspot persistence model??

- \*Al Hermann & Wei Cheng – ROMS simulation

# DBO Data & the AMP Model

- Pelagic-benthic coupling: DBO 1-4

Note: DBO 1-2 'upstream'; DBO 3-4 'downstream'  
from Bering Strait inflow

- Bering Strait inflow from long-term moorings



- Advection: DBO 1-8

Note: DBO 1-4 Advection & P-b coupling combined;  
DBO 5-8 Advection & Upwelling combined, also eddies

Note: DBO data seems particularly relevant to further development of the AMP model, which aims to predict seasonal variability in ocean processes in the Pacific Arctic over an annual cycle.