Northern Gulf of Alaska
Organic Matter Movement

RUSS HOPCROFT

LTER SCIENCE COUNCIL MEETING 2018

MADISON, WI

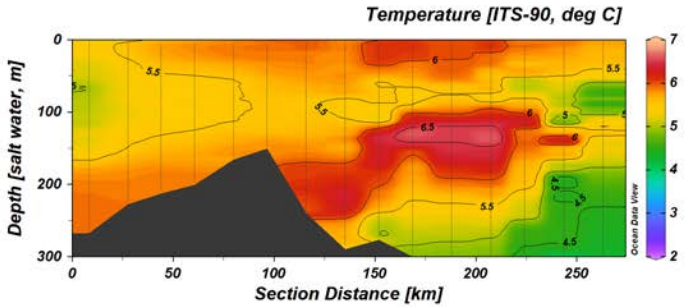
NATIONAL SCIENCE FOUNDATION

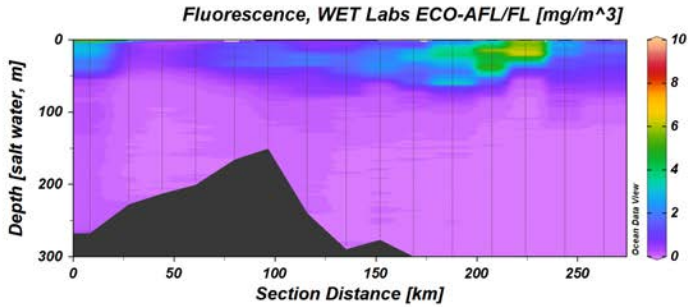
LTER NETWORK

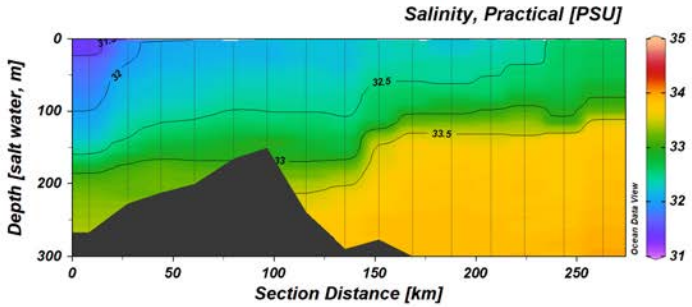
LONG TERM ECOLOGICAL RESEARCH

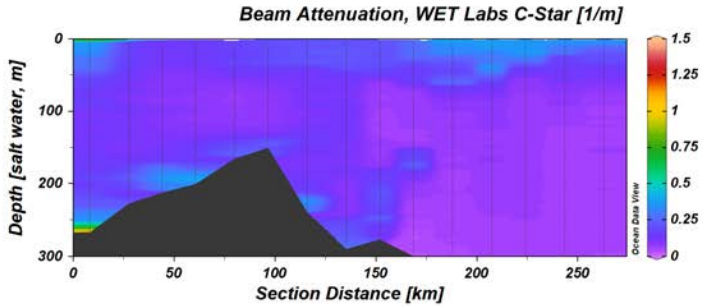
Site News

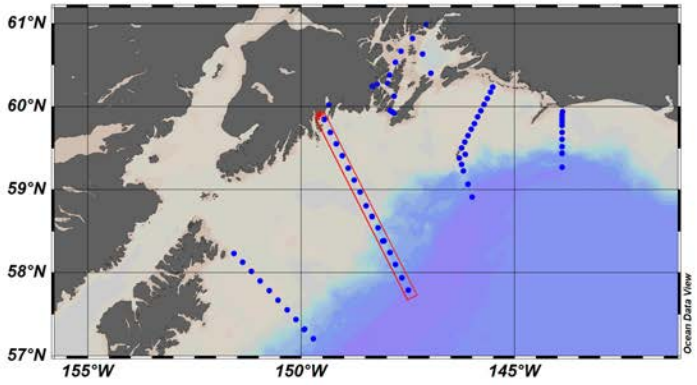
- First cruise completed
  - Hit Spring bloom
  - Water temperature “normal”
  - New larvacean species discovered
  - First NGA use of a UNOLS vessel (*R/V Sikuliaq*) in over a decade
  - 150 mile tow-yo along Seward Line
- Regional funding (NPRB) renewed
- Ancillary projects funded (NPRB, NSF)
- Murdock funded real-time mooring
- New Website operational
- New faculty hires?

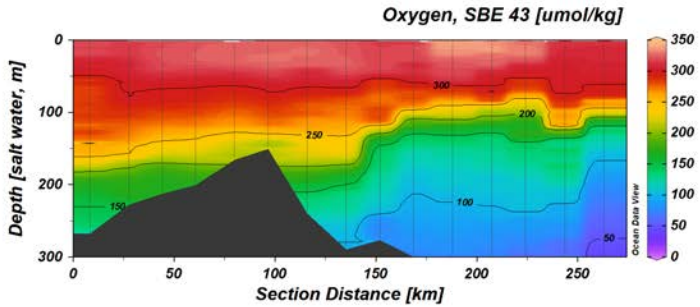












Organic Matter - Who/How

Andrew McDonnell (Assoc. Prof. UAF)

Tools:

- LISST 2.5-500 µm particles (CTD and mooring)
- Underwater Vision Profiler (UVP) 50 µm to 5 mm particles (CTD)
- Moored sediment traps
- POC & DOC (with Suzanne Strom)

Accumulation and export flux of POM throughout the year will be assessed by combining time series sediment trap measurements with direct collection and in situ optical measurements of PM concentration and size spectra.

Flux will be related to seasonal cycles of primary and secondary production and their environmental drivers.

Question: what controls vertical and lateral export of organic matter on seasonal to interannual time scales? How will this change in the future?

Organic Matter - Results

Nothing to date – samples and data from last cruise still to be processed

(Particle size measurements started 4-5 years ago)