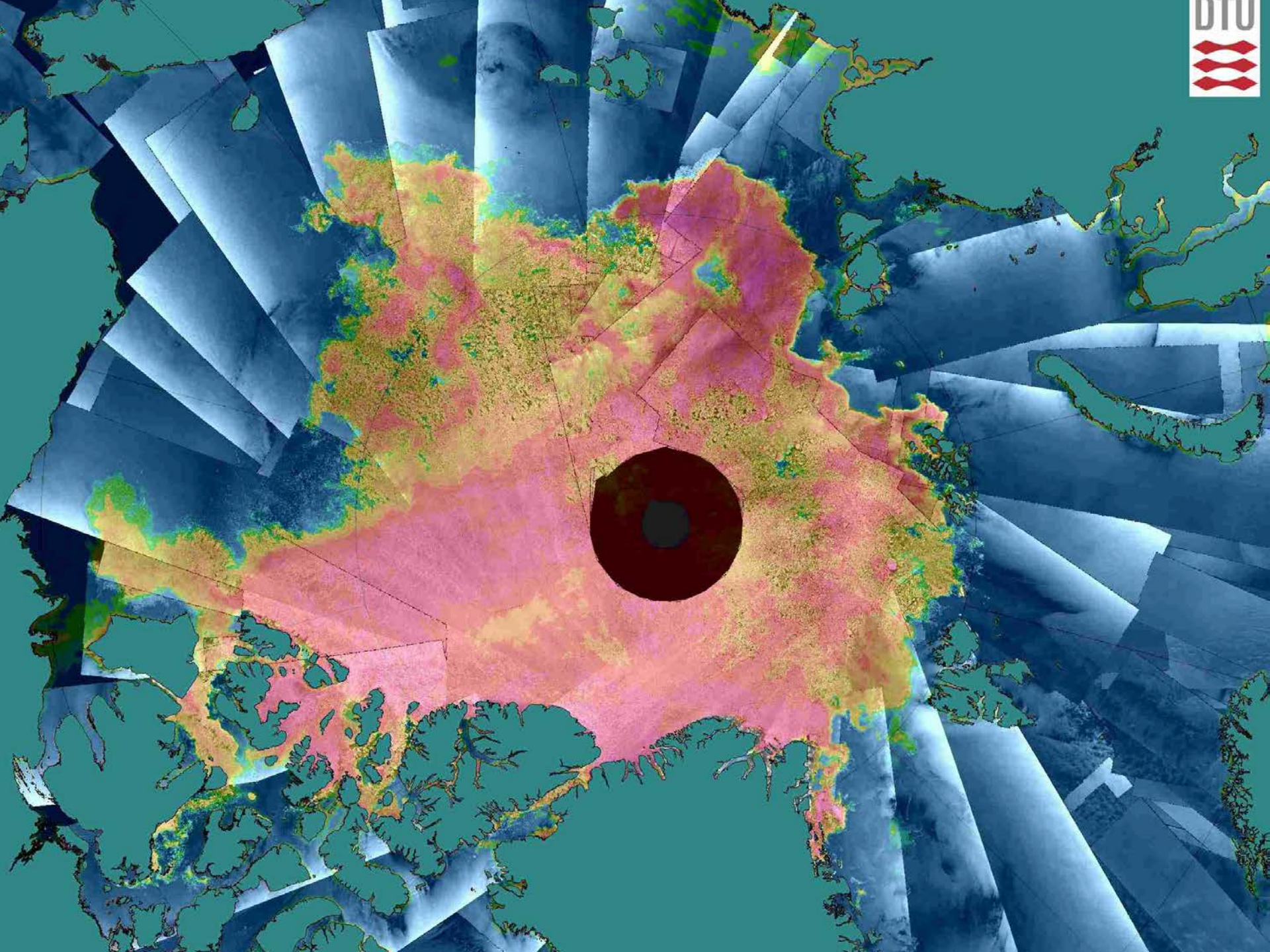


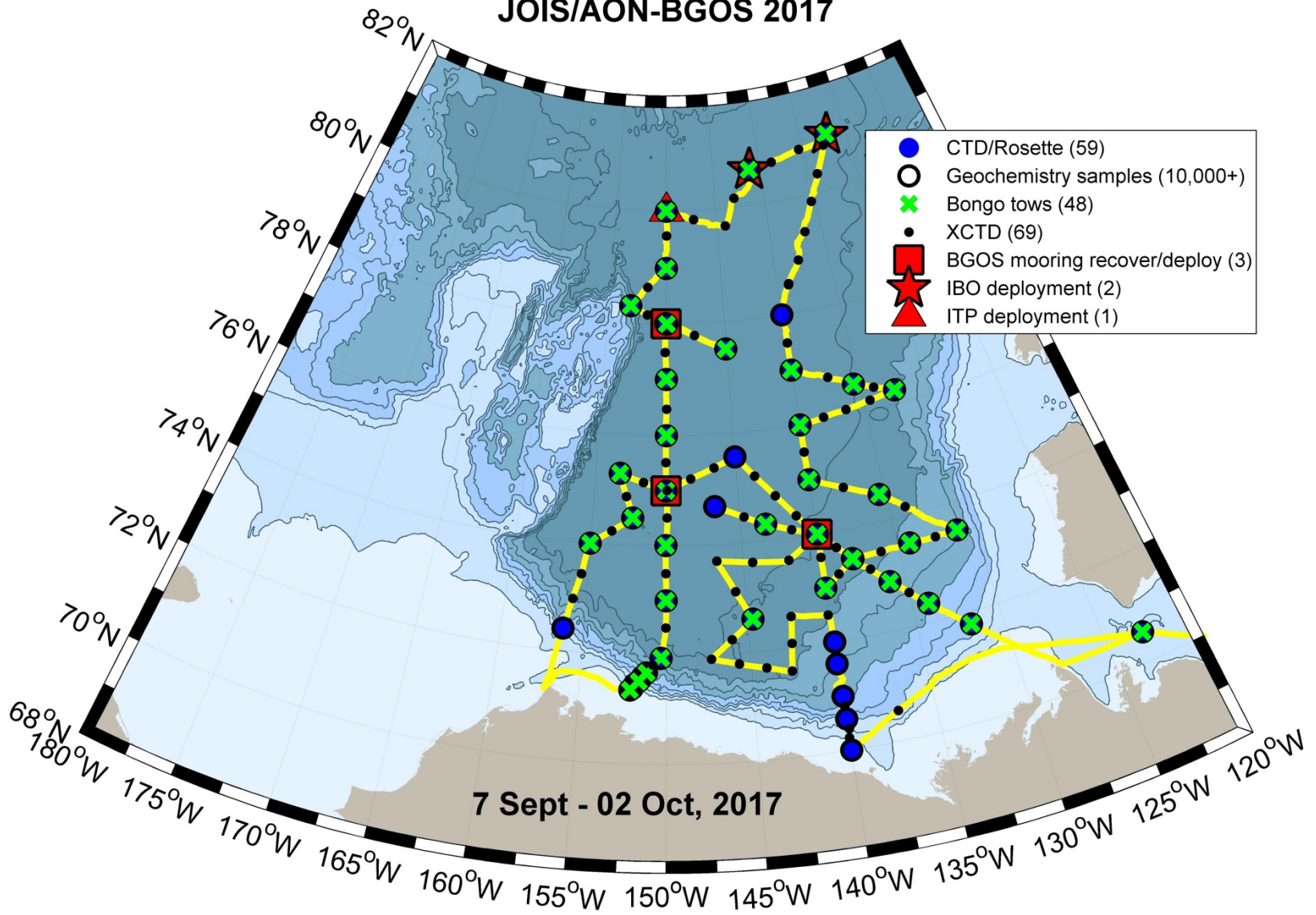
CCGS Louis S . St-Laurent



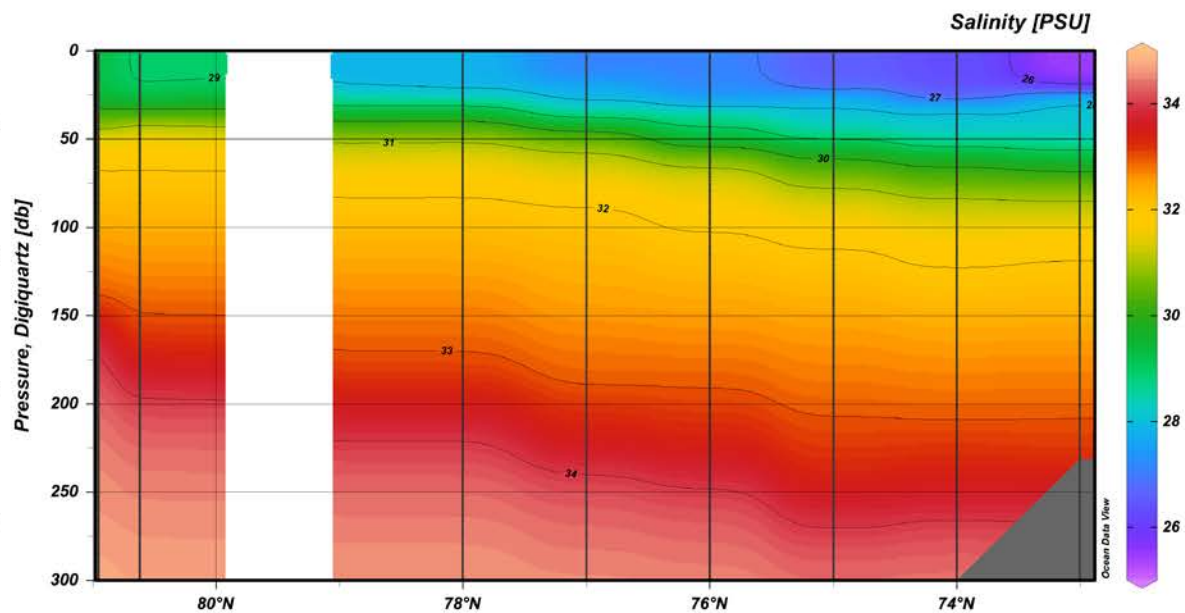
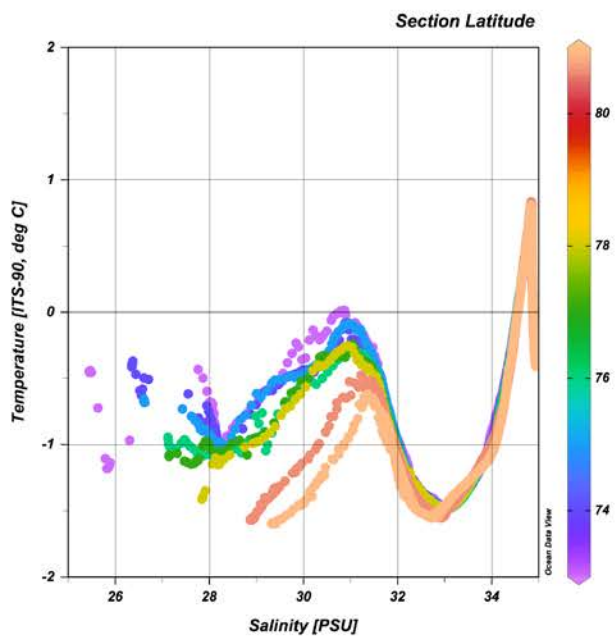
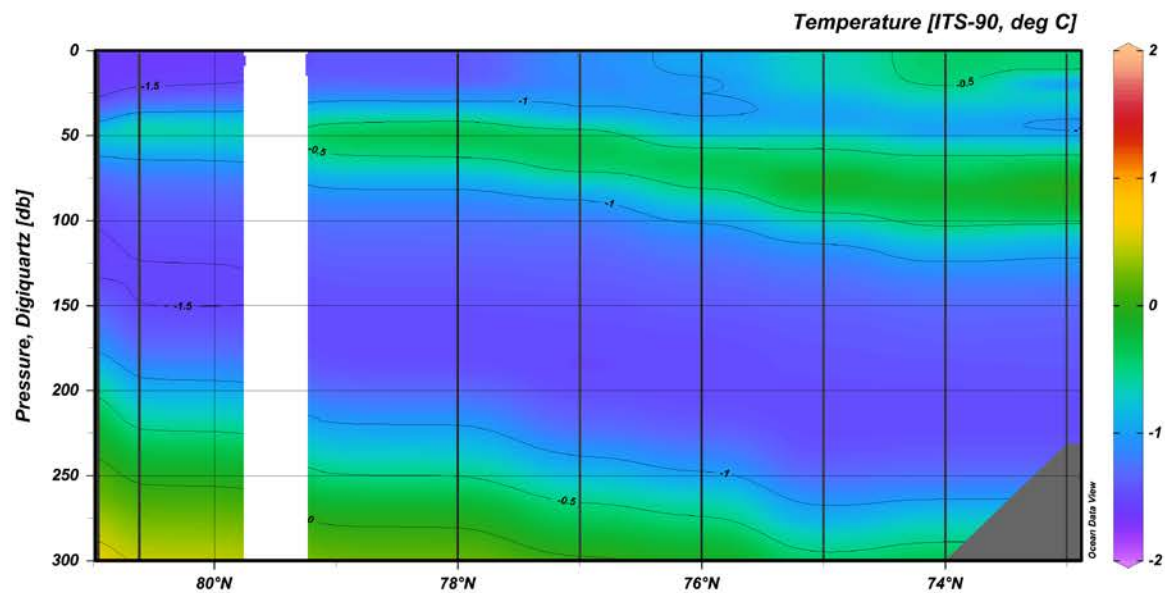
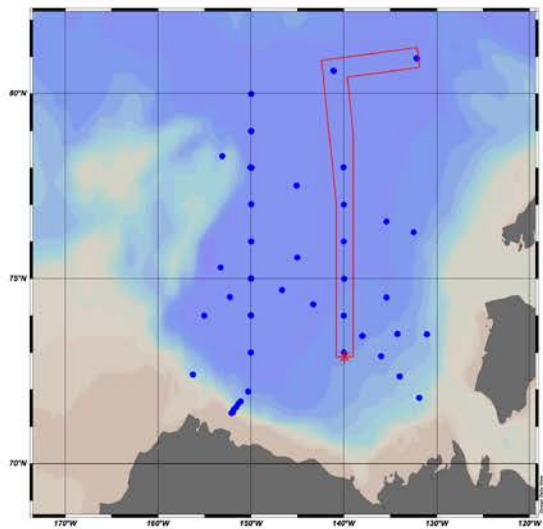
GEM Arctic 2017

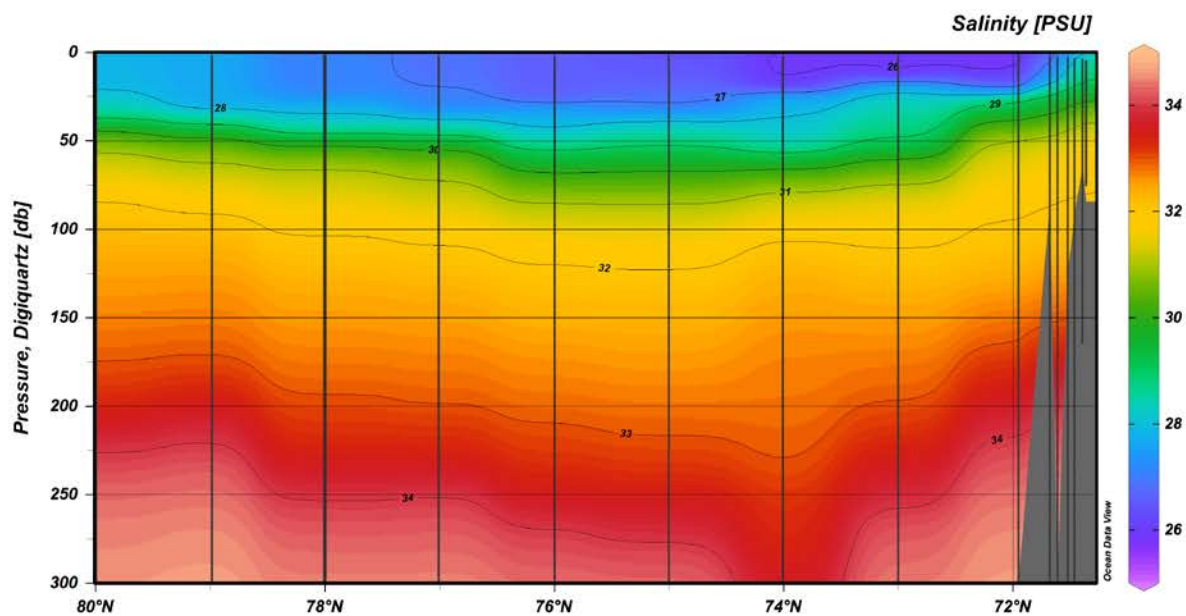
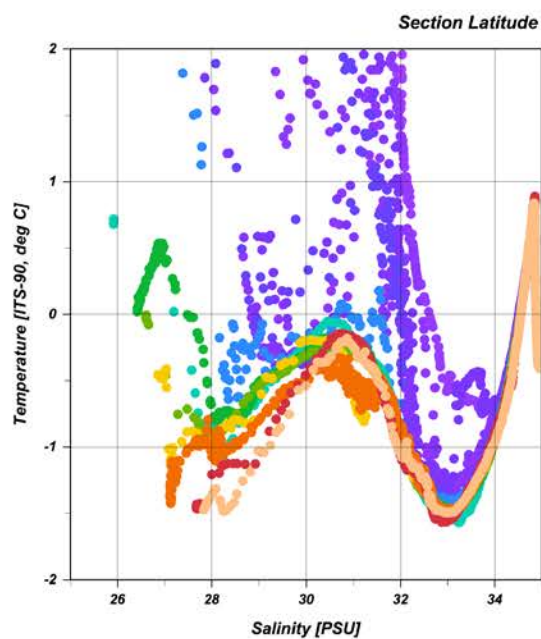
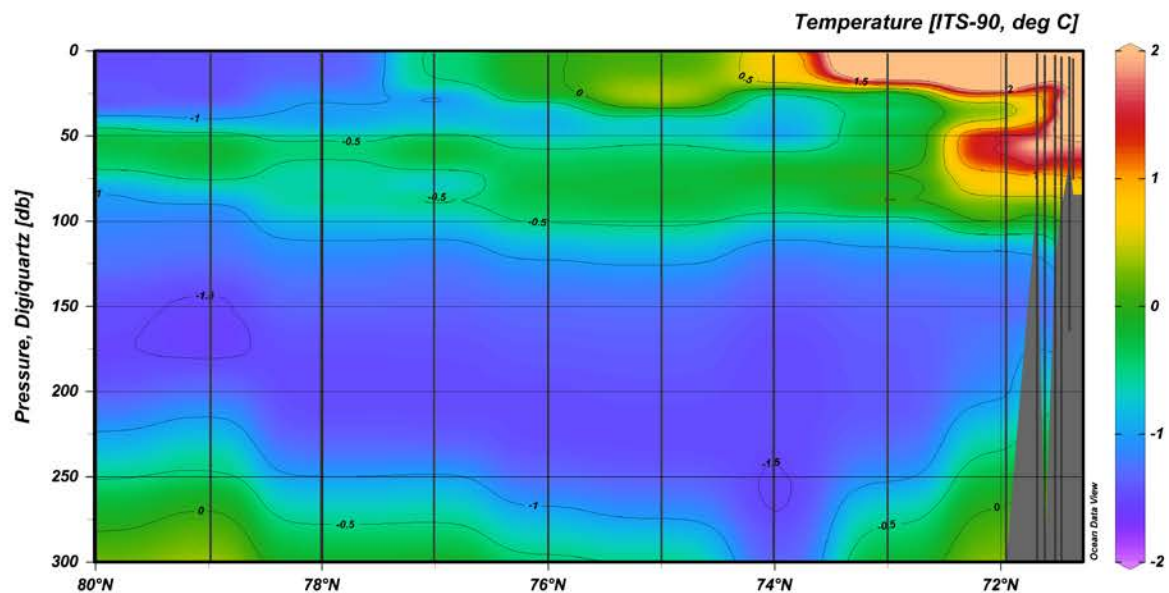
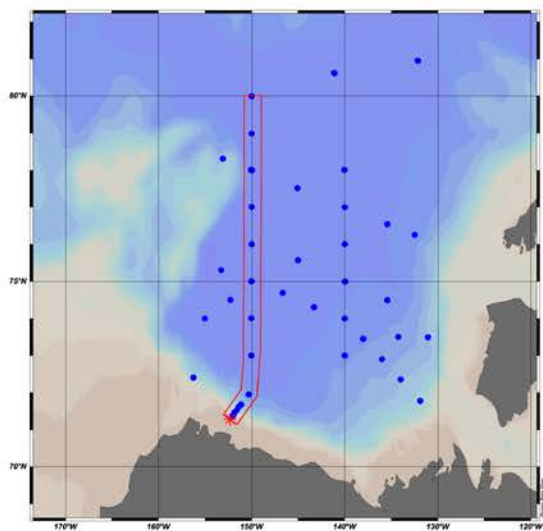


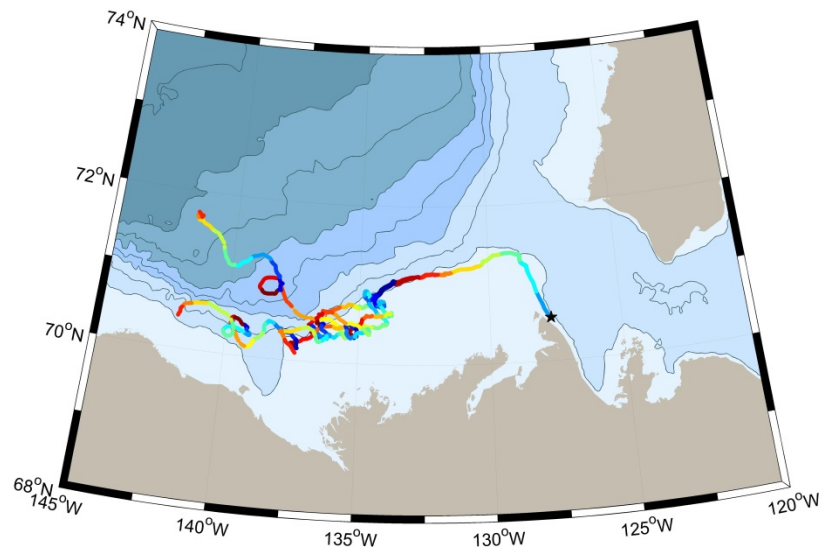
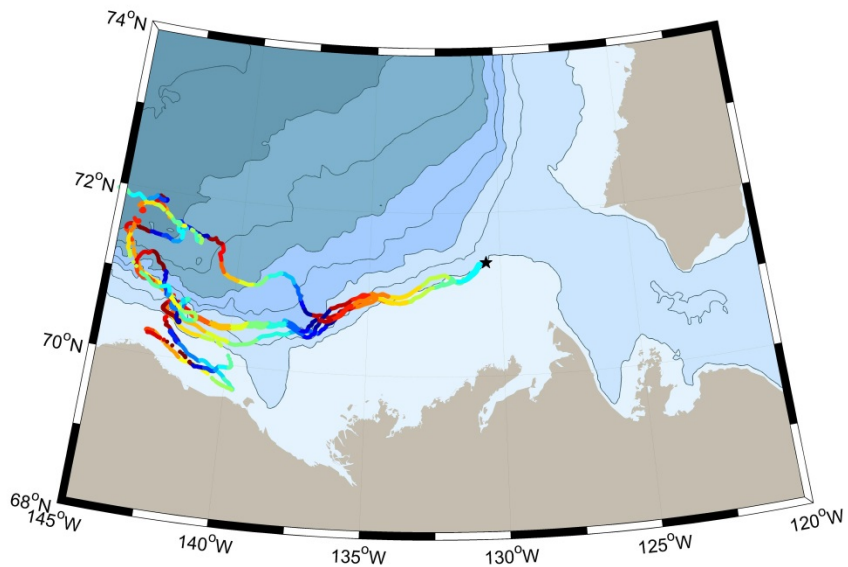
JOIS/AON-BGOS 2017



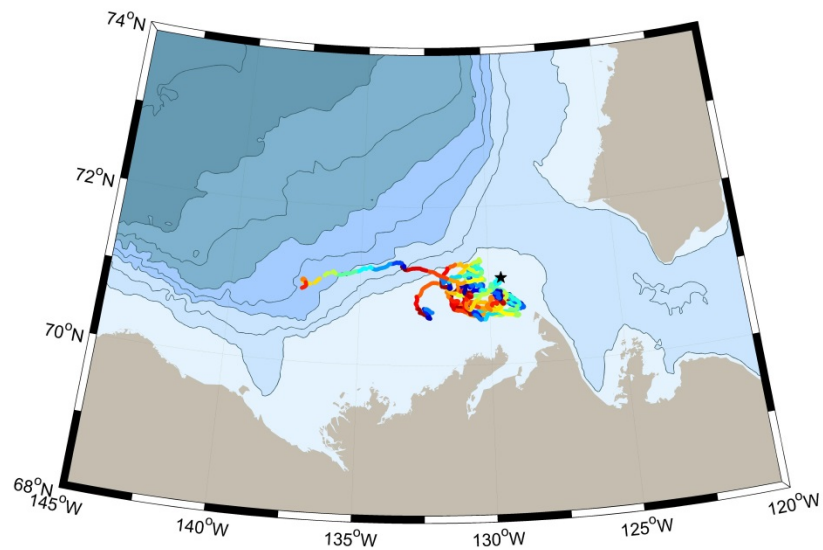
Thanks to all for a very successful 15th expedition!

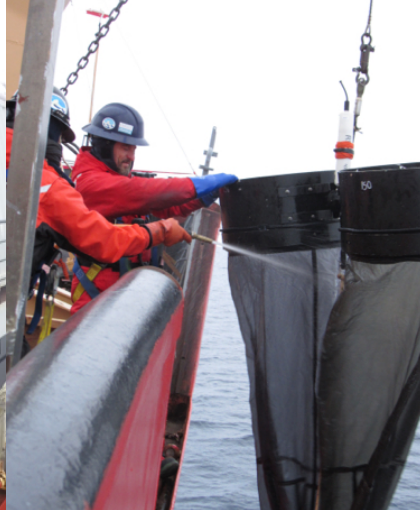
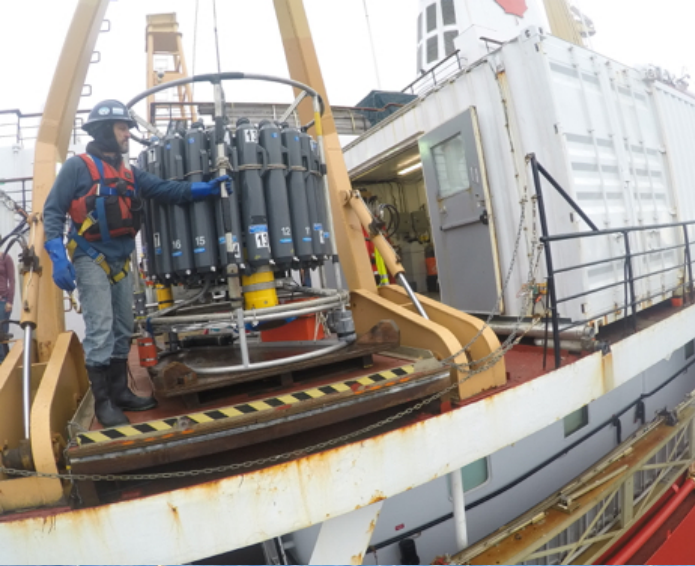






Spot Messenger surface drifters





The Charter Vessel

Name: F/V *Frosti* (1979)

Home Port: Richmond B.C.

Length: 40 m

Beam: 8 m

Draft: 5 m

Horsepower: 1200

Gross Tonnage: 454

Crew Structure

- Captain
- Cook
- Engineer
- Mate
- Deck Hands (2)
- Scientists (8)

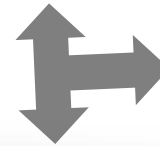
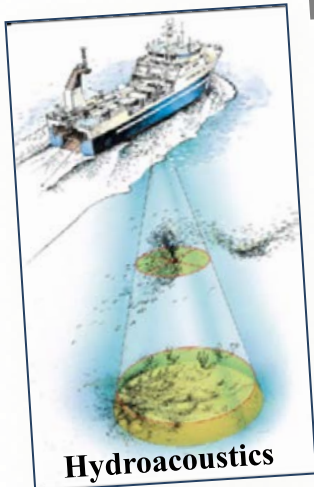
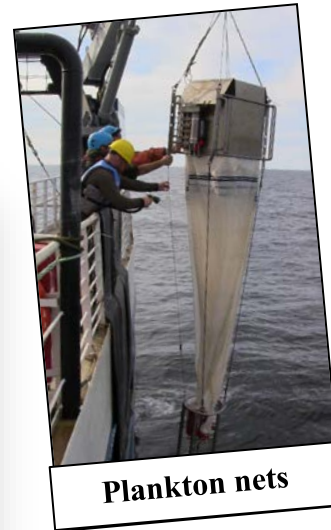
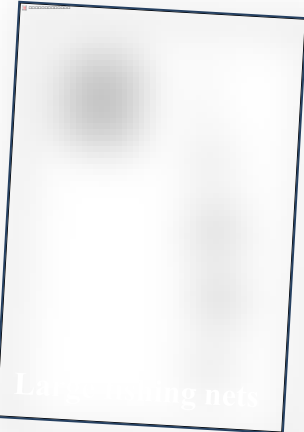


- Vessel retrofitted with side crane & wet/dry lab spaces
- Hydroacoustics system onboard (fish/plankton sensitive)
- Two weeks transit to from Vancouver to Tuktoyaktuk

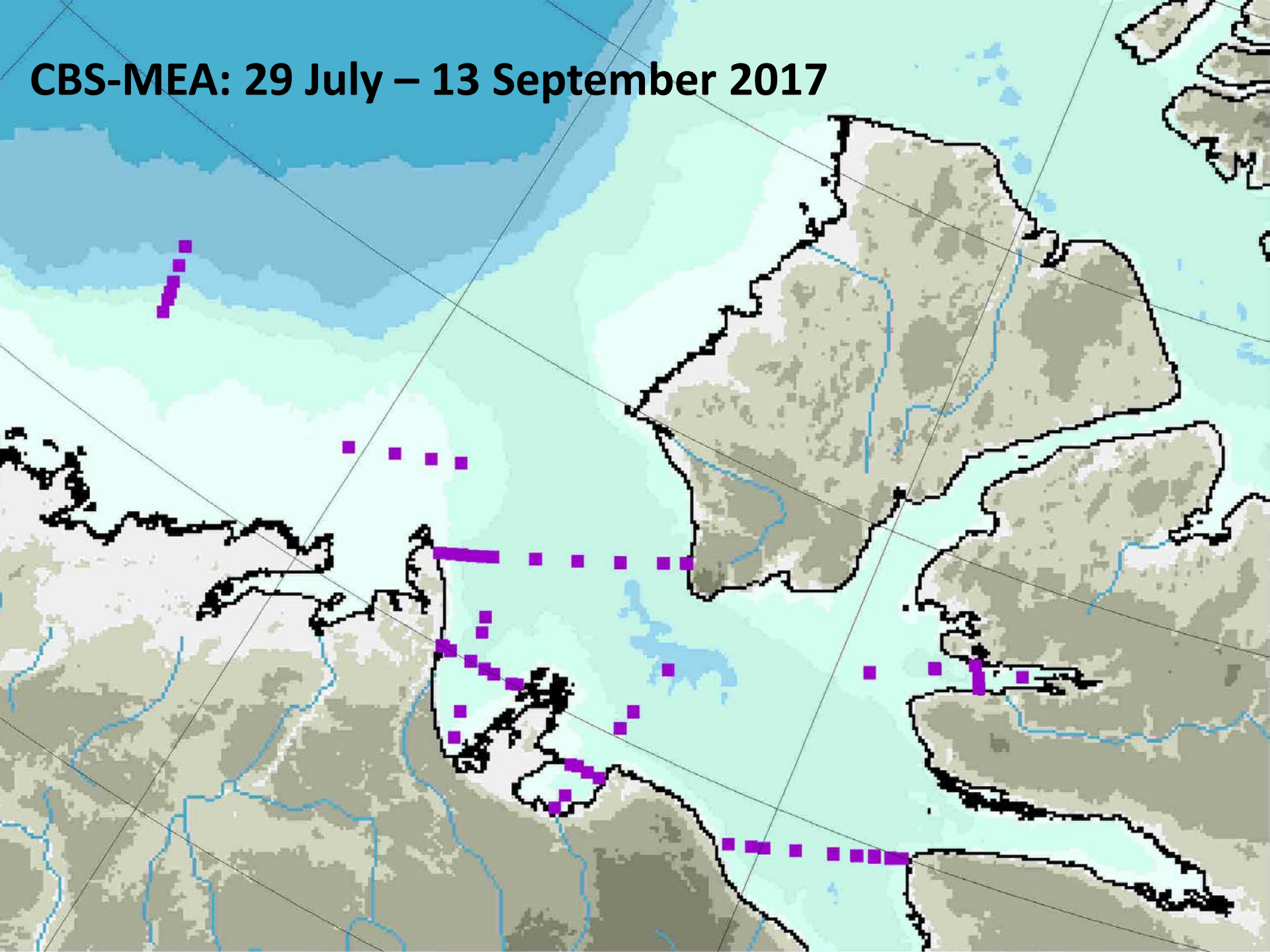
Sampling Equipment

Fishes

Habitats & Foodweb



CBS-MEA: 29 July – 13 September 2017





CCGS Sir Wilfrid Laurier

Marine Hazards ... Ocean Monitoring

15 Sep-10 Oct 2017

- 24 oceanographic moorings recovered & redeployed
- 5 drifting buoys deployed
- Continuous near-surface temperature & salinity
- 2 reference oceanographic sections completed
- Organic contaminants sampling – air & seawater
- Bottom mapping by multi-beam sonar - opportunistic

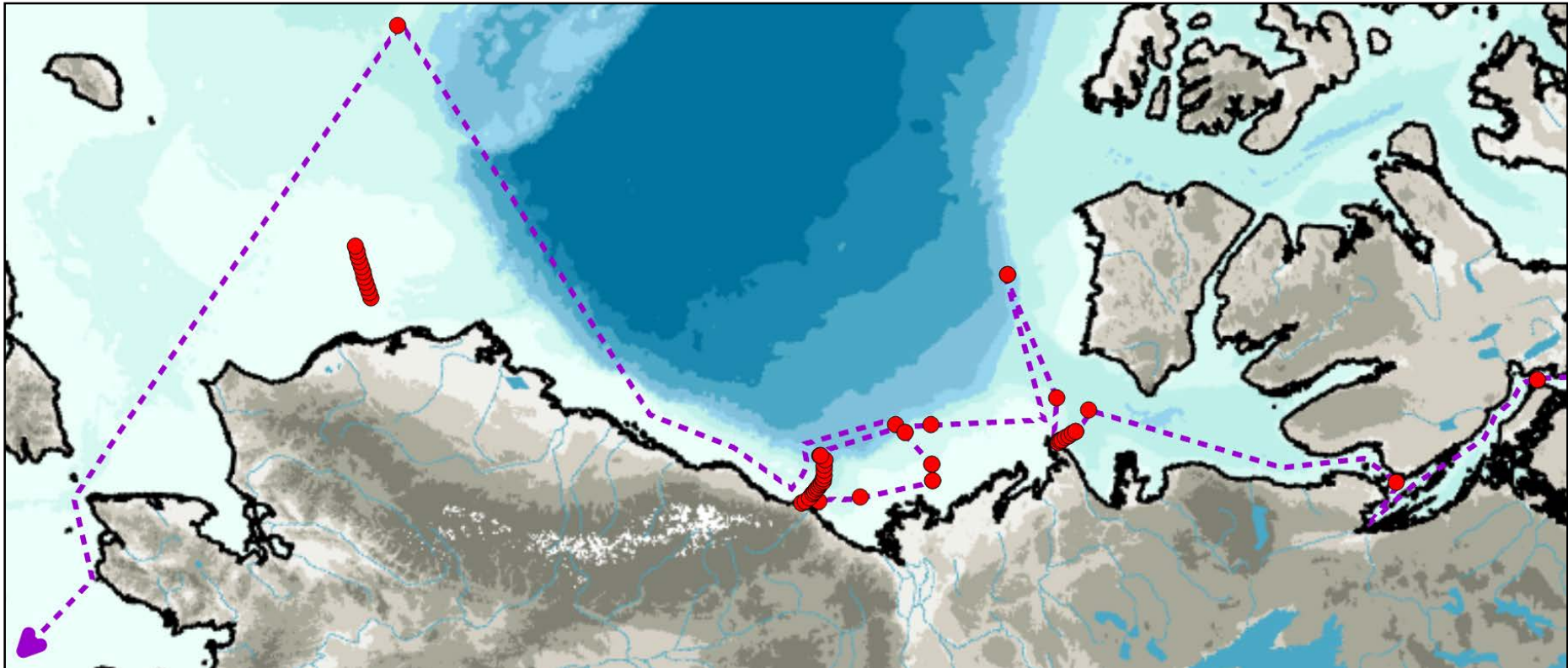


Collaborators

ArcticNet, NOAA, ASL Env Sci, GSC, WHOI, UAF, Stantec, CHS, ECCC, APL-UW

Supported by

PERD, ESRF, IOL, BOEM, ASL, OPP



Year-round data document marine climate: Norms, natural variation, extremes, progressive change

Sea ice

Thickness, drift, hazardous features

Sea surface

Storm waves, storm surge

Ocean current – surface to seabed

Seawater pathways (e.g. nutrient delivery, pollutant dispersal), dangerous currents

Ocean water masses – temperature, salinity

Identify properties, origins of seawater

Sediment in seawater

Suspension, transport & deposition

Organic contaminants in seawater

Biological enhancers

Nutrient upwelling, zooplankton variation

Ambient sound

Mammal's vocalization, species presence, natural sound, seismic surveys, ship noise

