Results observed in DBO3 from 2014-2016 by KOPRI

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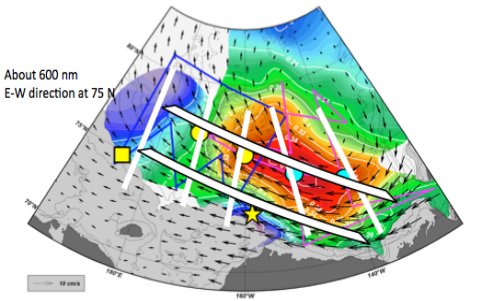
Research stations surveyed in 2014–2016



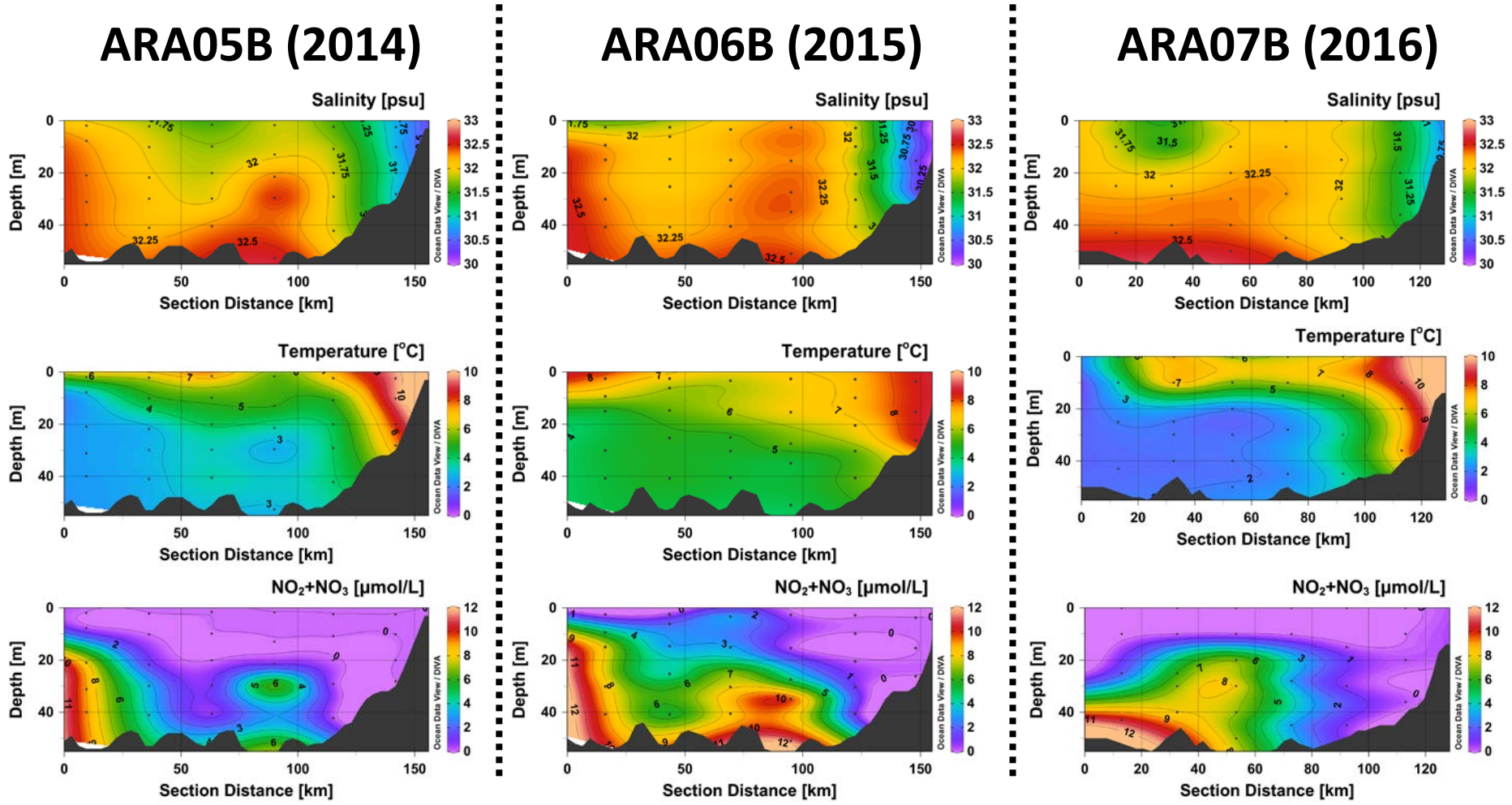
Background color: dynamic height at 100dbar relative to 800dbar from Mirai and Louis S. St-Laurent 2008 cruises (Oceanic Beaufort Gyre)
Black vectors: average sea ice motion vectors for Nov. 2007- Apr. 2008 (Sea Ice Beaufort Gyre)
Symbols: Mooring array in 2012-2013 (TUMSAT/KOPRI/NIPR & WHOI)

ARA05B cruise: July 31–August 25, 2014

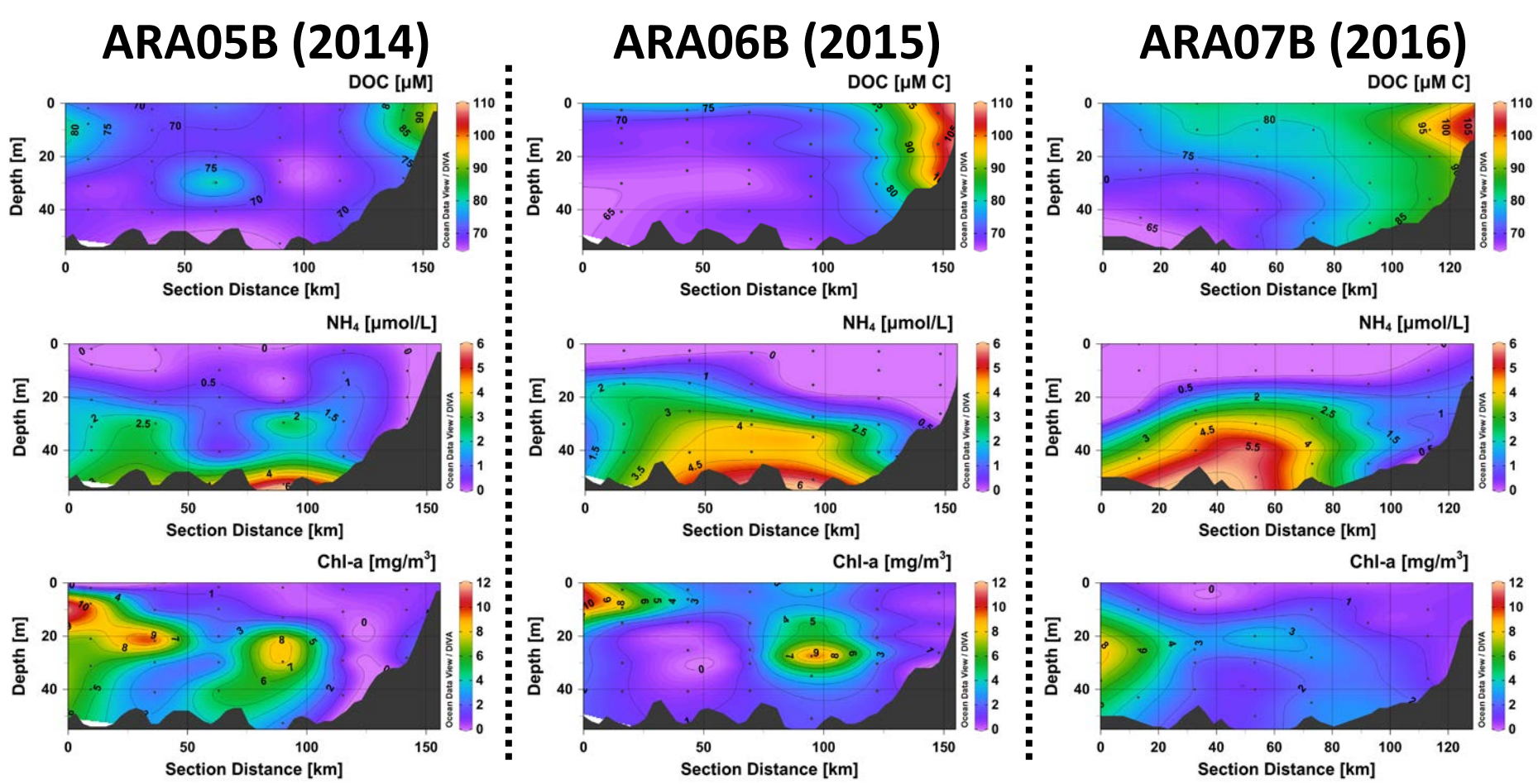
ARA06B cruise: August 2–20, 2015

ARA07B cruise: August 6–19, 2016

Nutrients (NH_4, NO_2+NO_3, PO_4, SiO_2), dissolved organic carbon (DOC), and particulate organic carbon (POC)



- **West: colder, saltier, nutrient-rich (Anadyr Water or Bering Shelf Water)**
- **East: warmer, fresh, nutrient-poor (Alaska Coastal Water)**



- **High DOC concentration was observed in the eastern side where the influence of Alaska Coastal Water was strong.**
- **Active remineralization by heterotrophic bacteria occurred in DBO3.**
- **Did The influence of Alaska Coastal Water become more stronger in 2016?**
- **Was there any change of river discharge rate in Yukon River?**

Distributions of DOC and POC in 2015 and 2016