

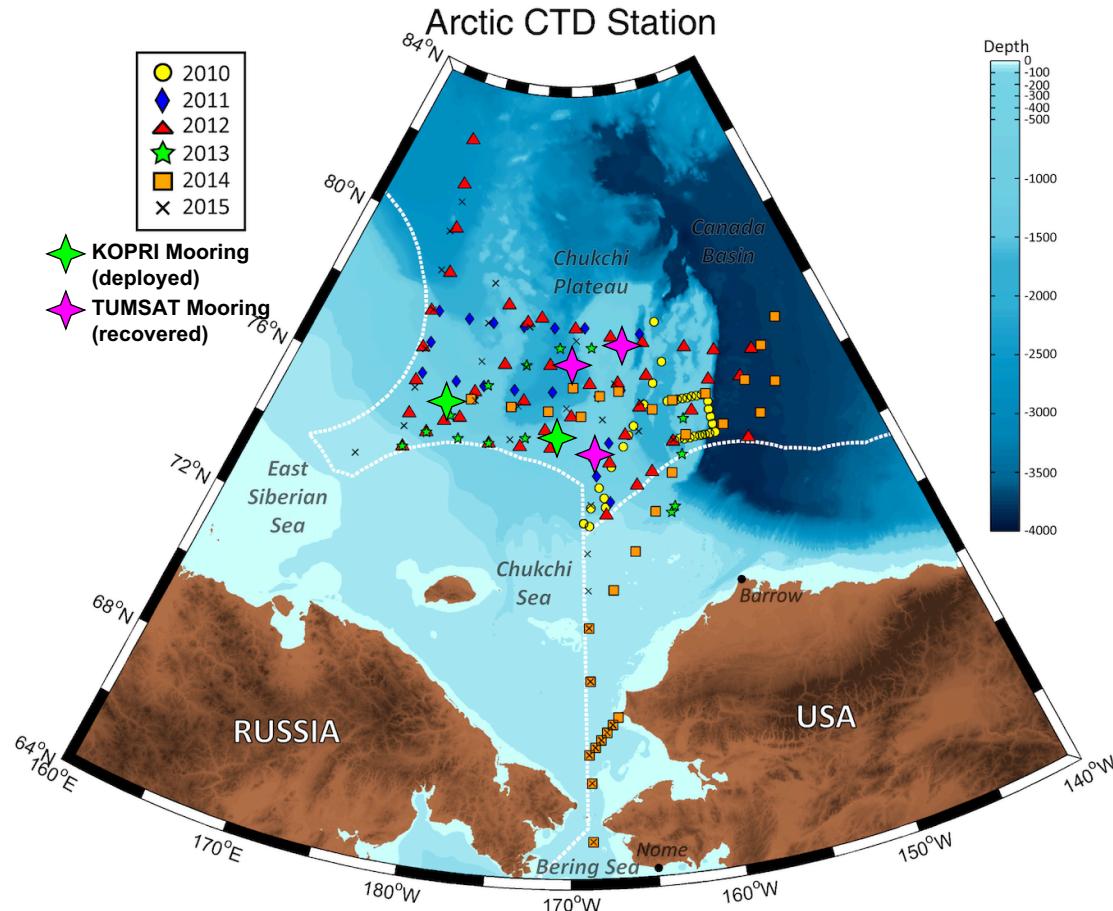
Sustained DBO Sampling & Data Access



Presenter: Kyoung-Ho Cho

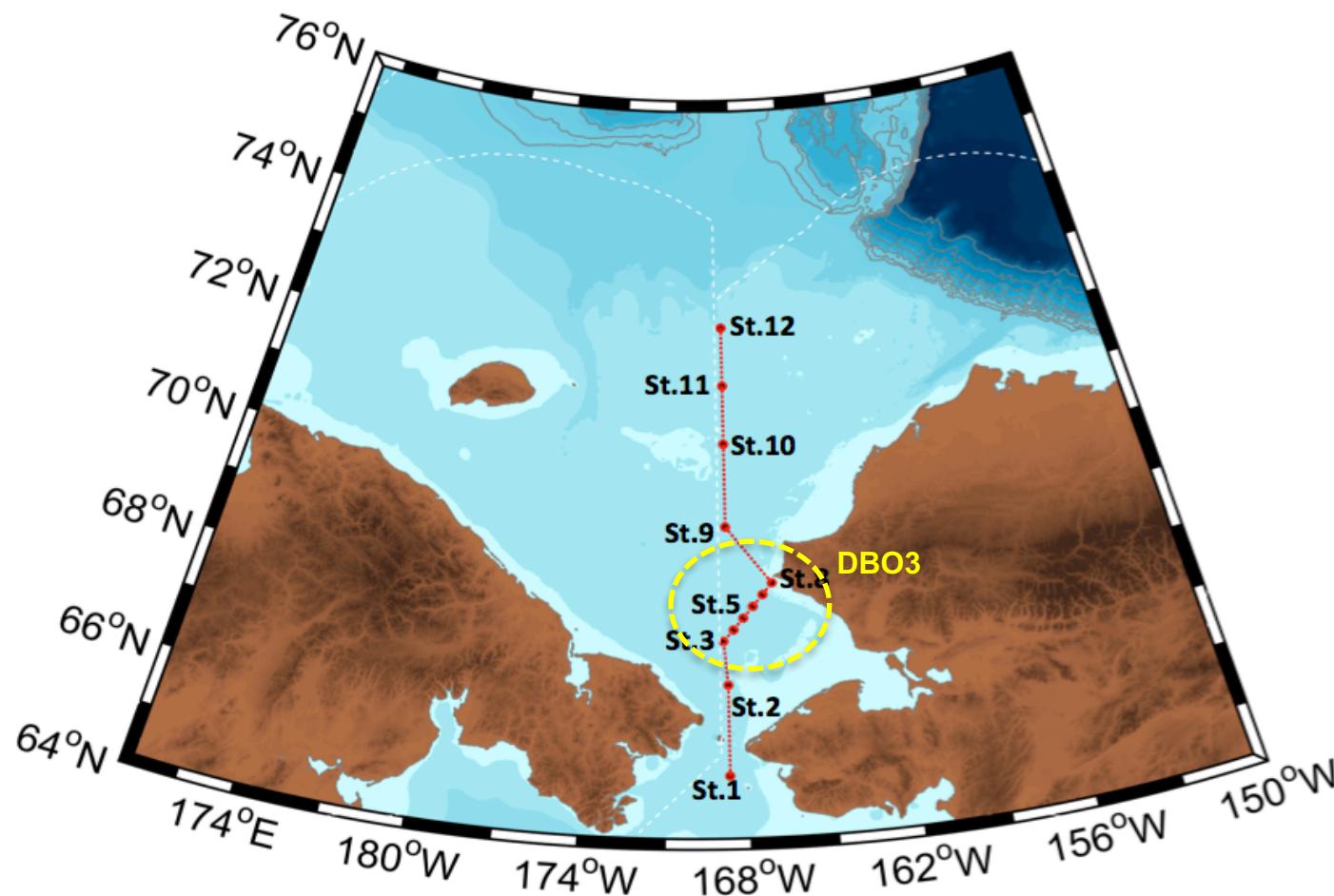
Division of Polar Ocean Environment
Korea Polar Research Institute, Korea

IB R/V ARAON Arctic Cruises (2010~2015)



	2010	2011	2012	2013	2014	2015
CTD	38	18	44	16	32	42
XCTD	*	33	48	36	51	61
Period	07/20~08/10	08/02~08/16	08/04~09/06	08/24~09/01	08/01~08/23	08/01~08/21

Hydrographic Stations in 2015



What we observed in DBO3

Equipment

- CTD, Lowered ADCP
- Bio/Geo/Chemical equipment

Parameters

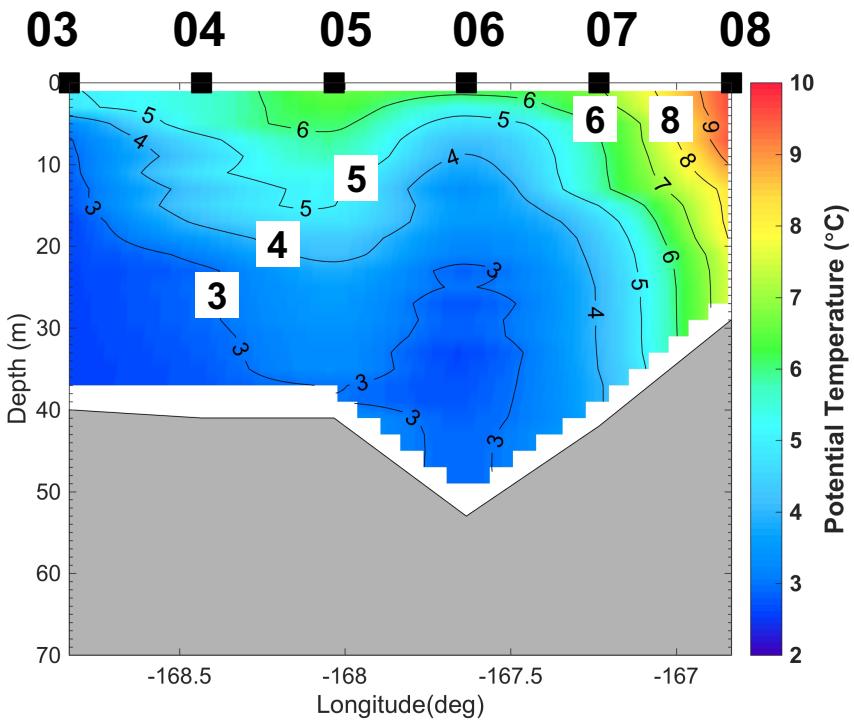
- Temperature*, salinity*, DO, fluorescence, PAR, transmission, backscatter, pressure*, water velocity*
- Primary production and new production,
- Phytoplankton composition,
- Chlorophyll-a and HPLC,
- Zooplankton composition and abundance
- Bacterial and virus biomass
- Micro-zooplankton biomass, composition, and grazing
- Nutrients*, POC, PON, DOC, DON, DOP
- N₂O gas, pCO₂, DIC , pH, SS, TA
- Atmospheric components



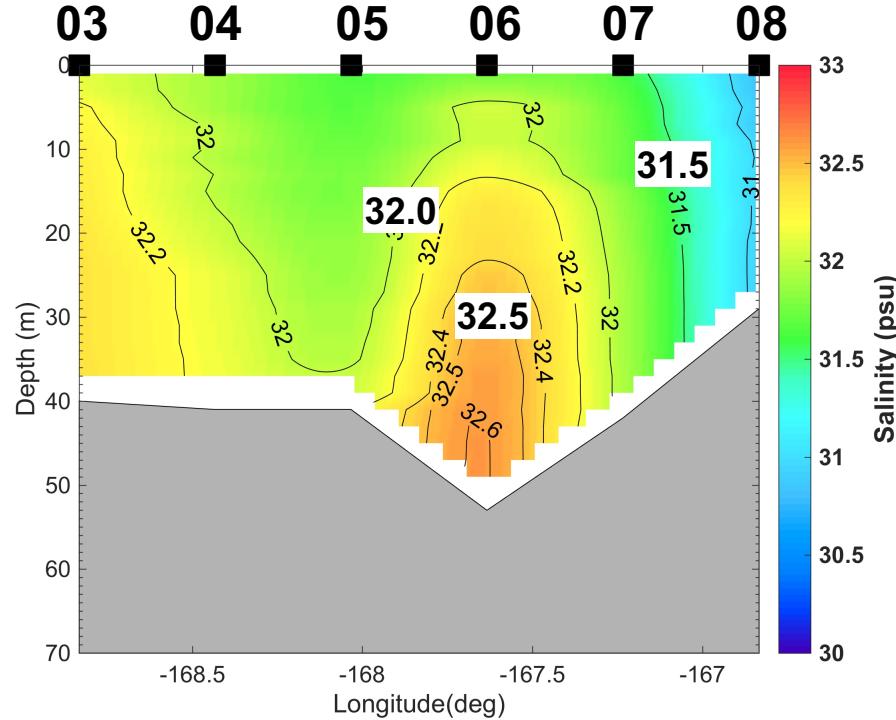
* The metadata have been submitted to EOL DBO data archive.

DBO-3 Observation (CTD-T, S) - 2014

Temperature



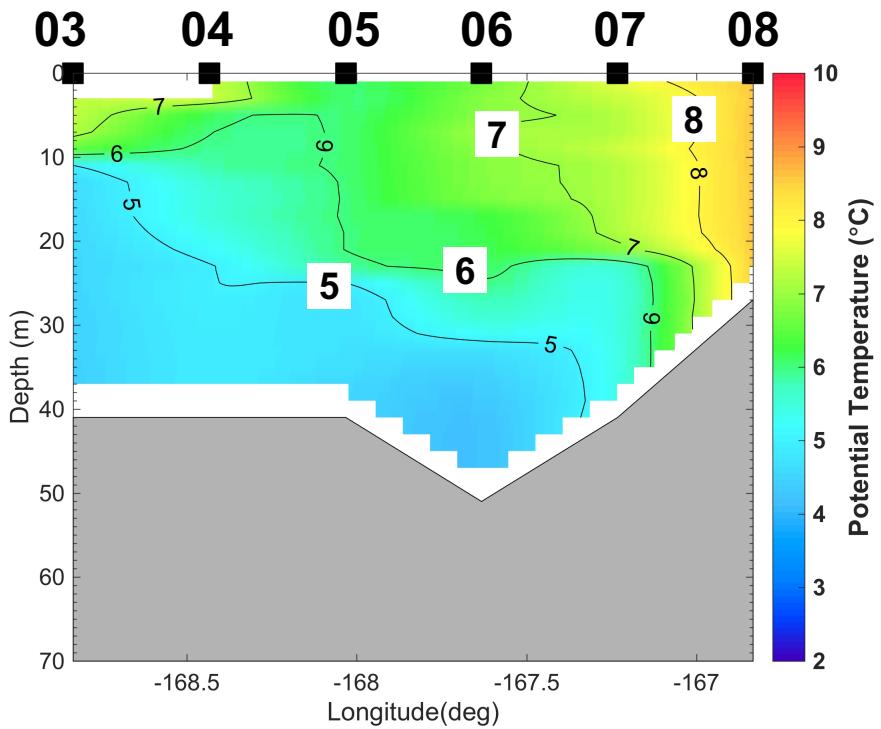
Salinity



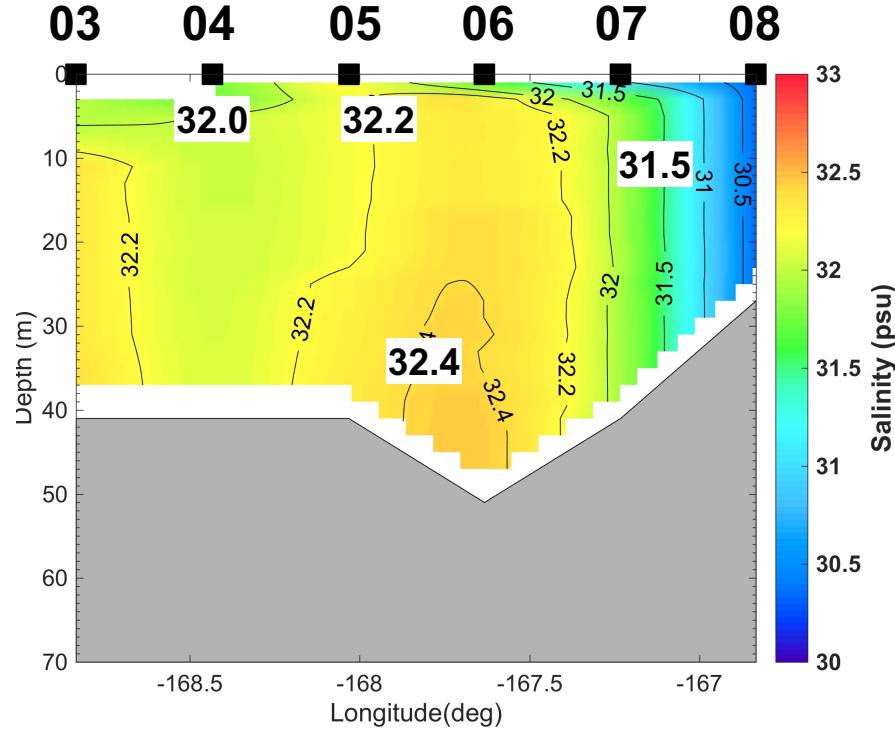
- Relatively cool, saline water on the bottom of St.03 ~ St.06
- Relatively warm, fresh water nearshore (St.08)

DBO-3 Observation (CTD-T, S) -2015

Temperature



Salinity

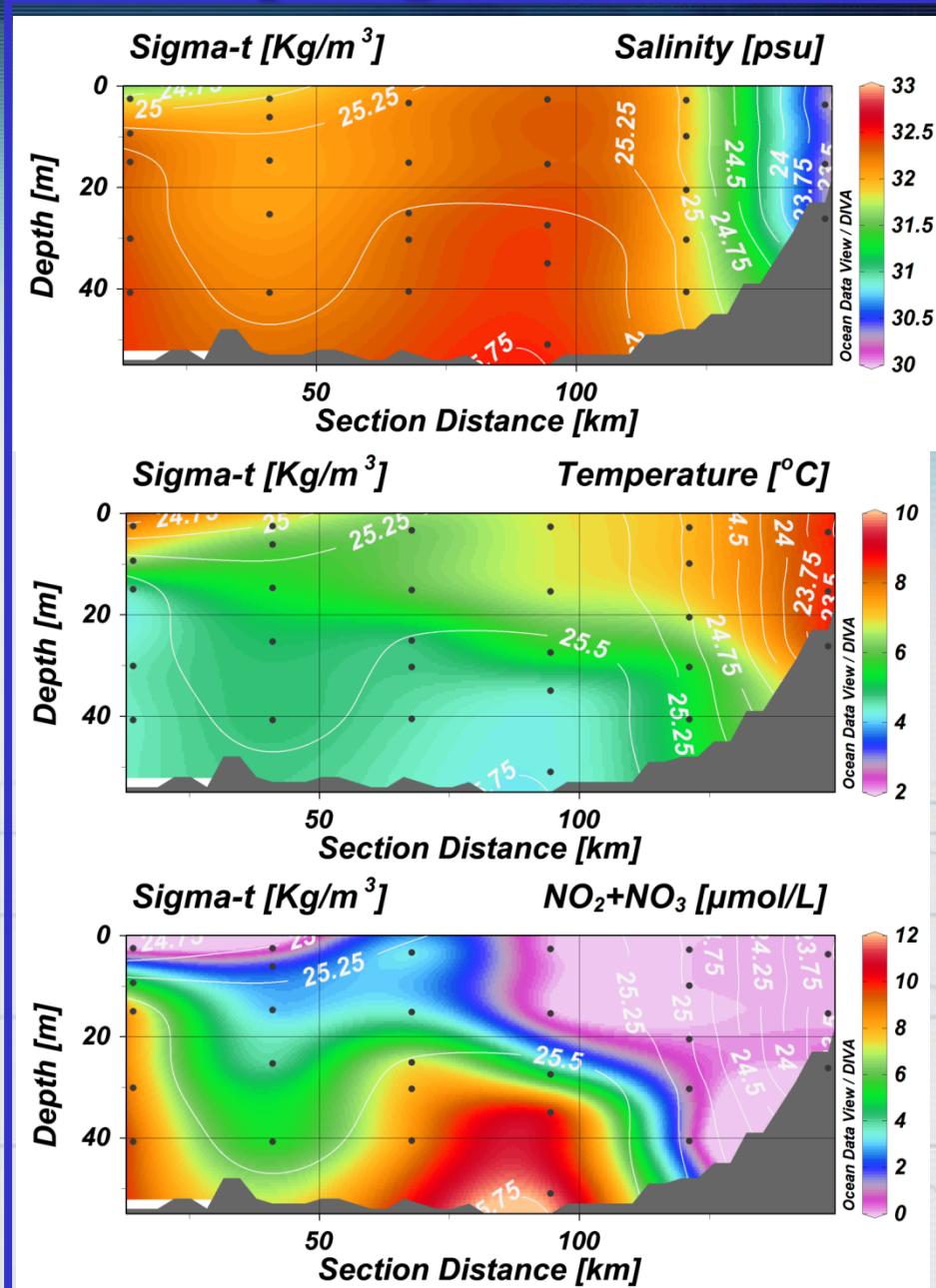
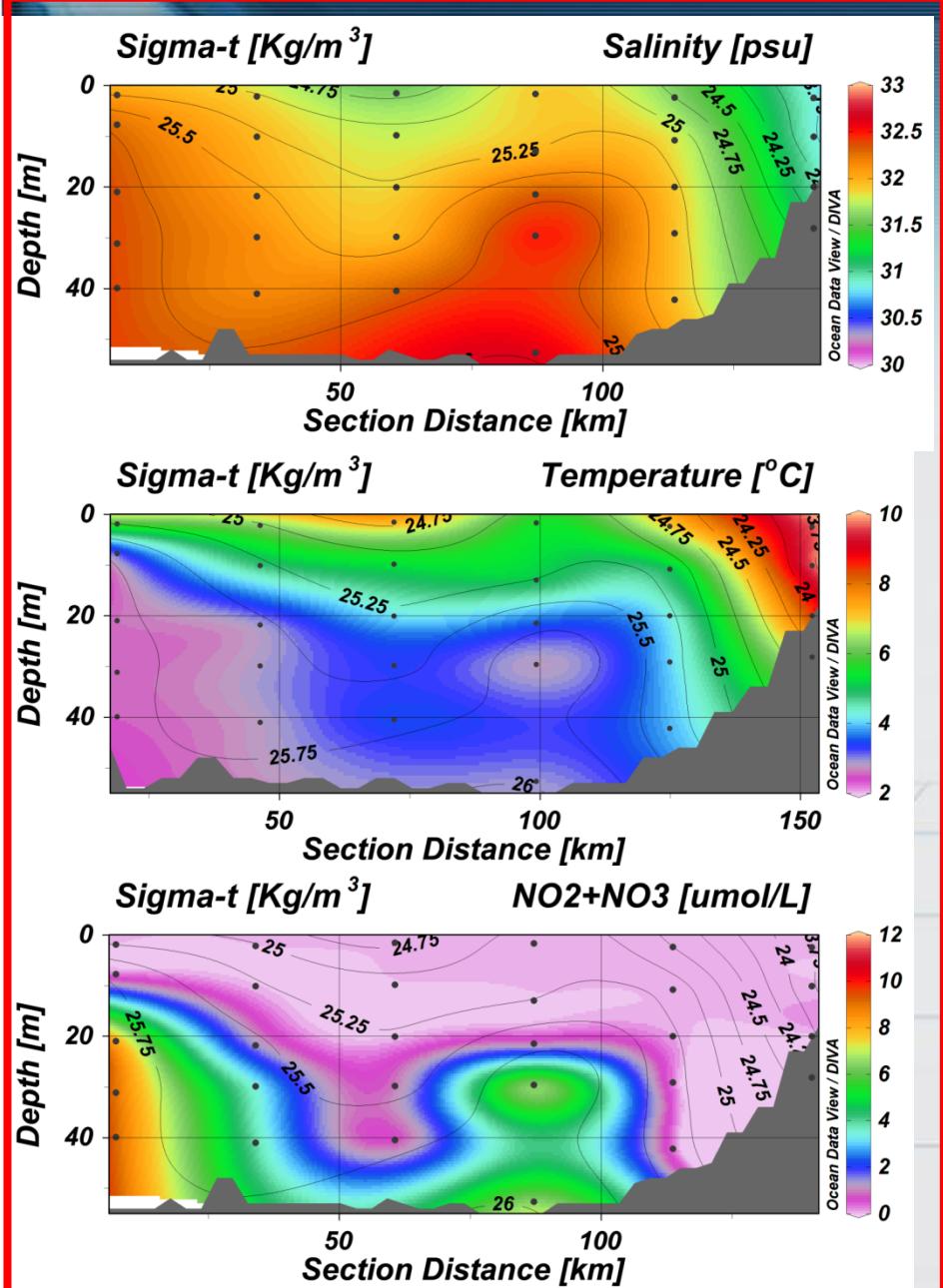


- Warmer, less saline water on the bottom of St.03 ~ St.06
- Relatively warm, fresher water nearshore (St.08)
- Surface fresh water expanded to St.07

2014

DBO-3 water sampling

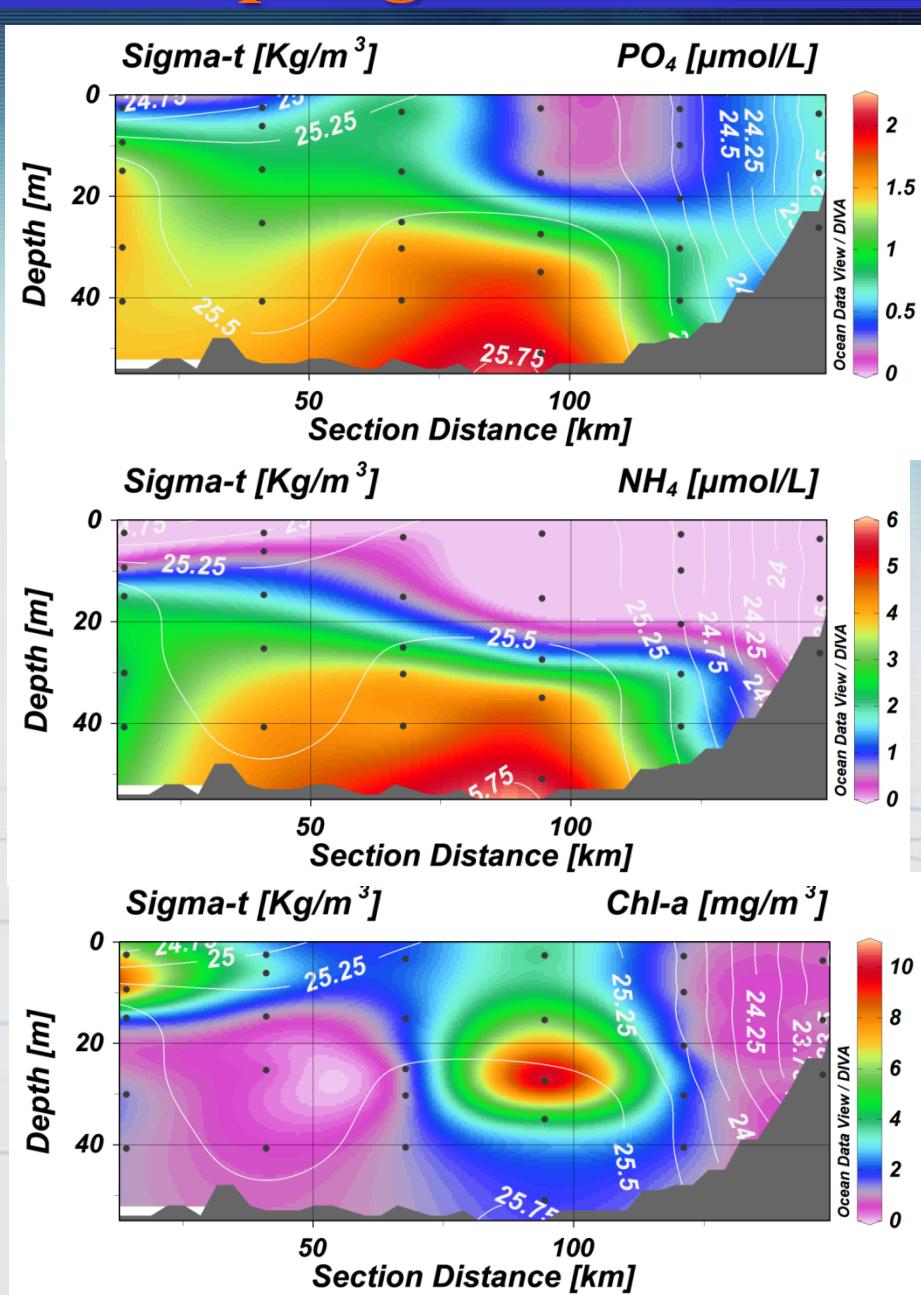
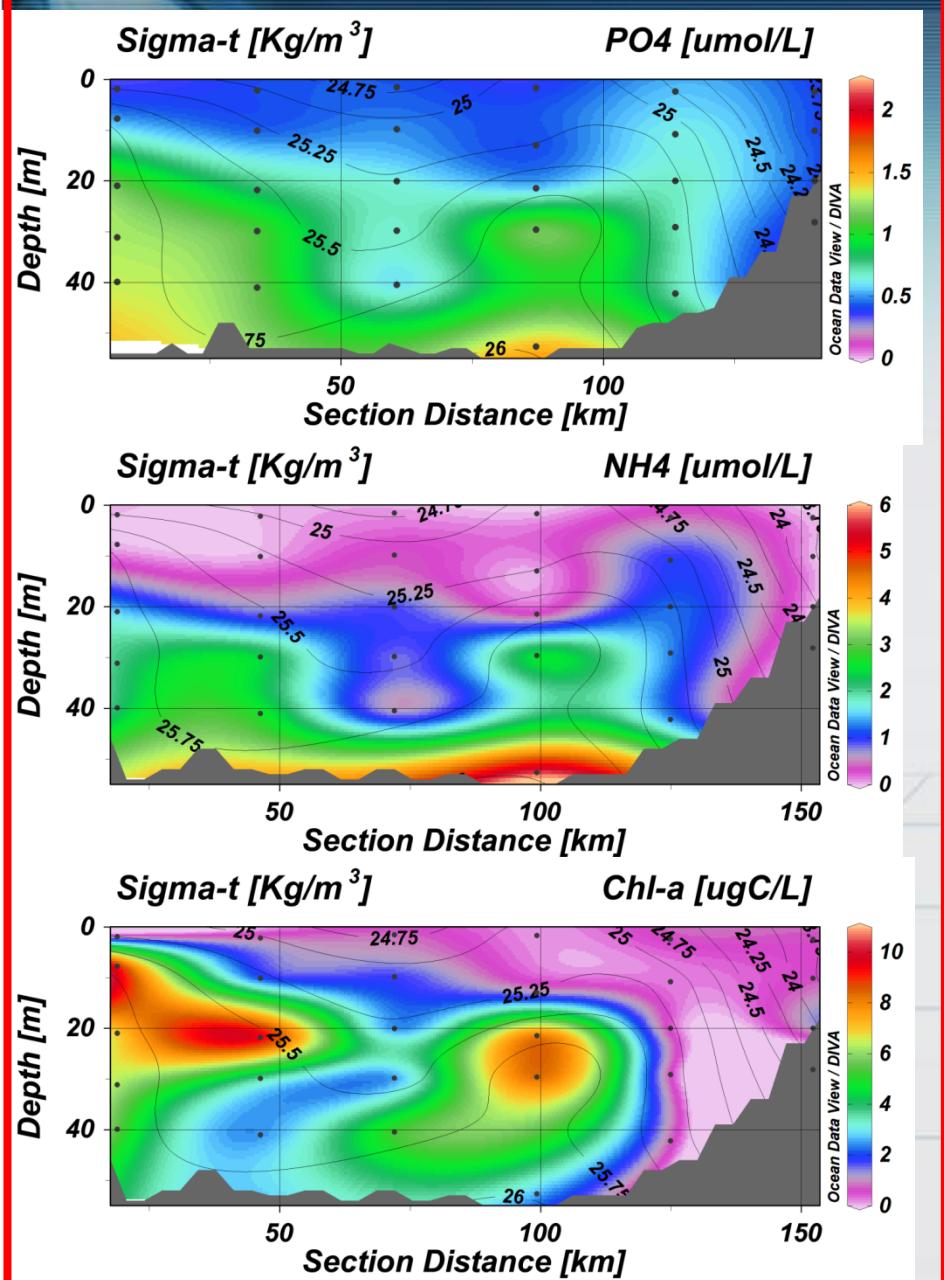
2015



2014

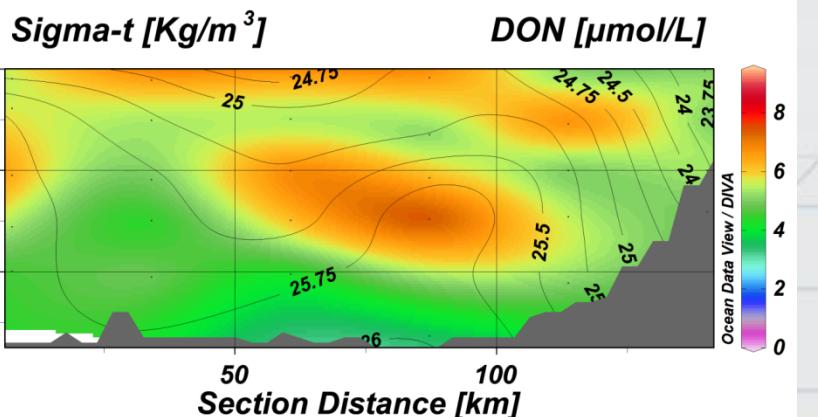
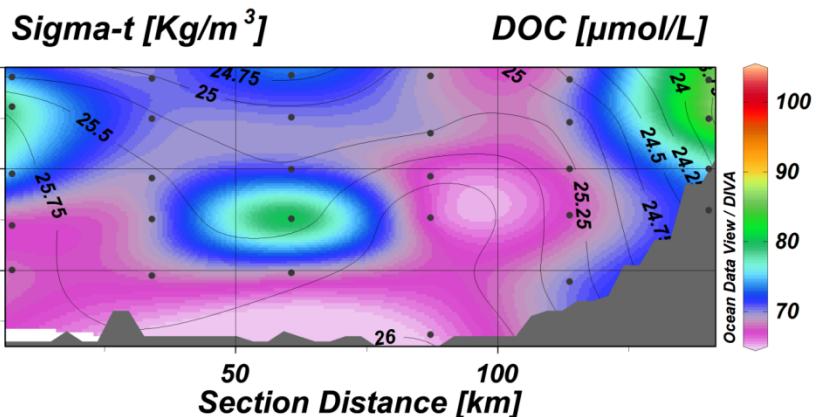
DBO-3 water sampling

2015

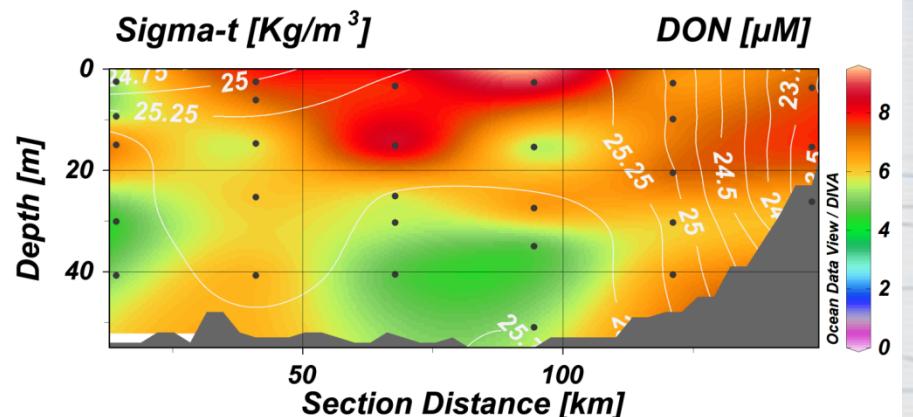
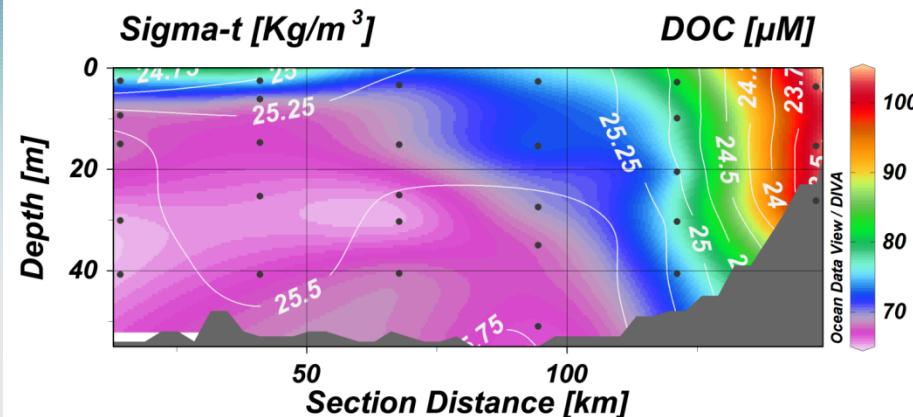


DBO-3 water sampling

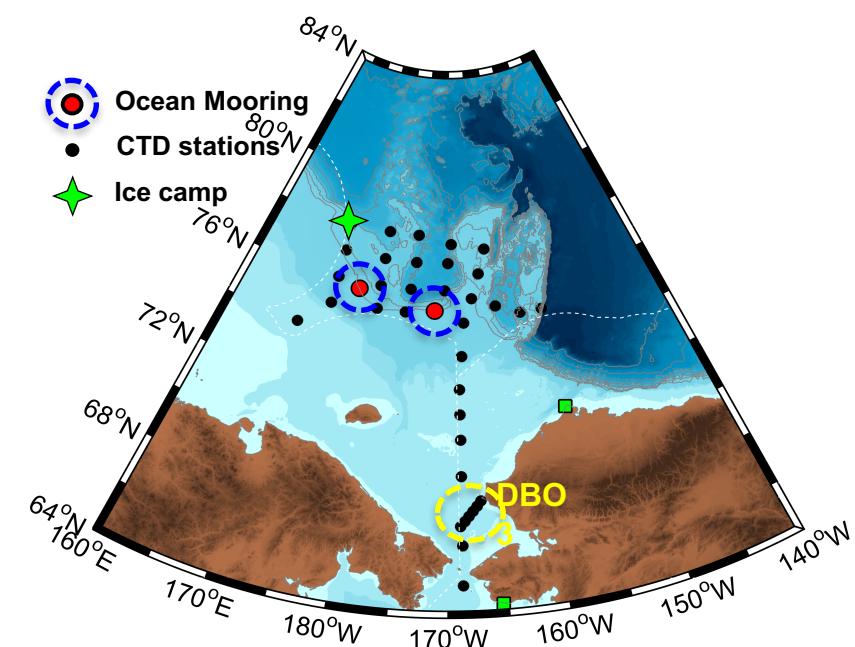
2014



2015



Map for 2016 summer cruise (plan)



T-Logger 1 : 45m (05090)	T-Logger 1 : 35m (05098)
T-Logger 2 : 50m (05091)	T-Logger 2 : 40m (05099)
Microcat 2 : 70m (13234)	Microcat 2 : 50m (12267)
T-Logger 3 : 85m (05092)	T-Logger 3 : 75m (05100)
Microcat 3 : 100m (13235)	T-Logger 4 : 100m (05101)
T-Logger 4 : 125m (05093)	Microcat 3 : 120m (12268)
T-Logger 5 : 150m (05094)	
Syntactic foam float	
AZFP:175m (55090)	
Microcat 4 : 176m (13236)	ADCP(300 kHz) : 140m (21637)
T-Logger 6 : 200m (05095)	Microcat 4 : 141m (12269)
T-Logger 7 : 250m (05096)	T-Logger 5 : 170m (05105)
ADCP(150 kHz) : 300m (23161)	Microcat 5 : 200m (12270)
Microcat 5 : 301m (13237)	T-Logger 6 : 225m (05103)
ST. : 320m	T-Logger 7 : 250m (05104)
T-Logger 8 : 321m (05097)	
Syntactic foam float : 471m	
AR : 483m (66051/66052)	
Bottom : 500m	VITROVEX x 3 : 469m
	Bottom : 500m

Period: August 2-20(?), 2016

