


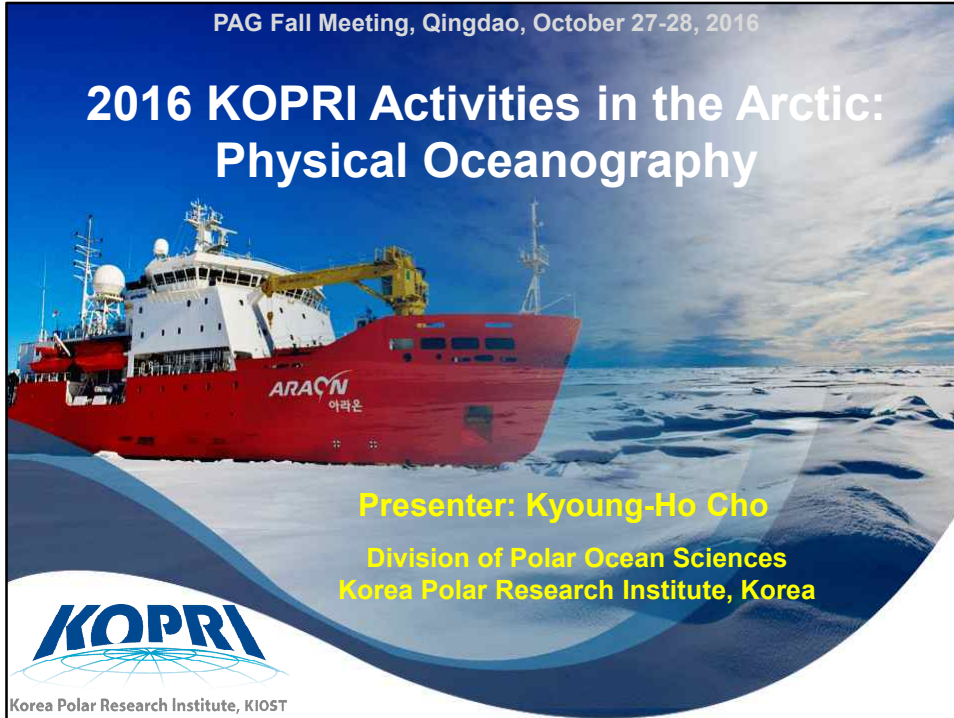
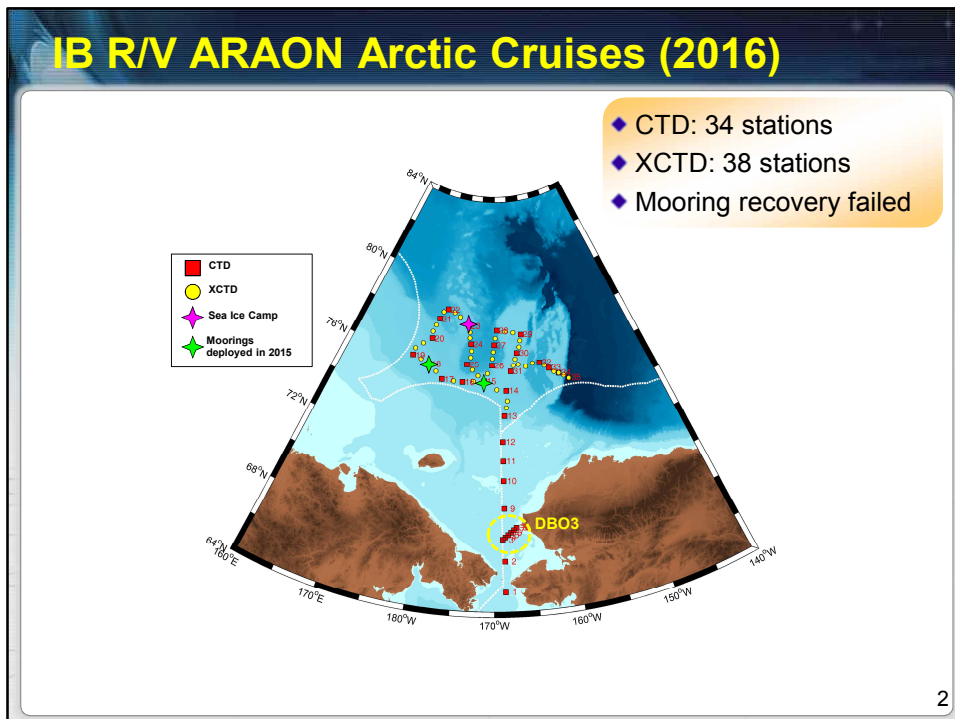
PAG Fall Meeting, Qingdao, October 27-28, 2016

## 2016 KOPRI Activities in the Arctic: Physical Oceanography

**Presenter: Kyoung-Ho Cho**  
Division of Polar Ocean Sciences  
Korea Polar Research Institute, Korea

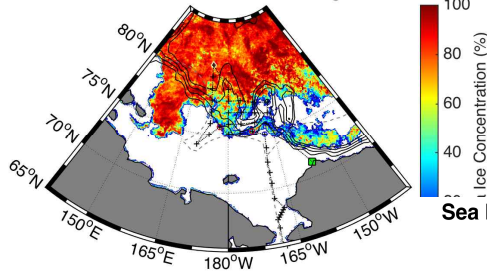


Korea Polar Research Institute, KIOST

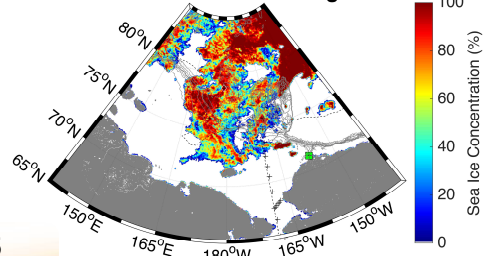



## Sea Ice Condition (2015 vs. 2016)

Sea Ice Concentration on Aug 15 2015



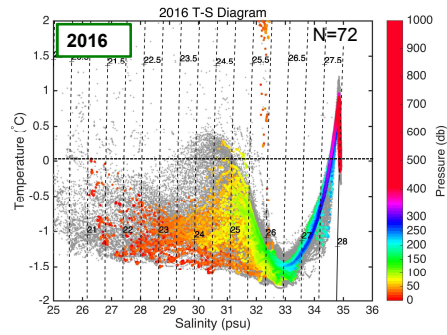
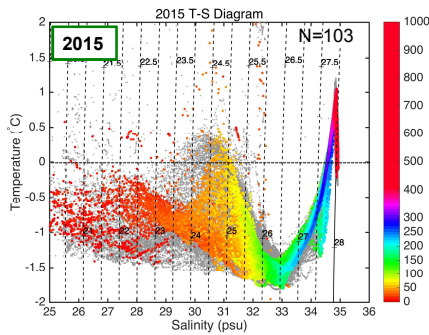
Sea Ice Concentration on Aug 15 2016



- ◆ High SIC around the ESS in 2015
- ◆ High SIC around the CB in 2016

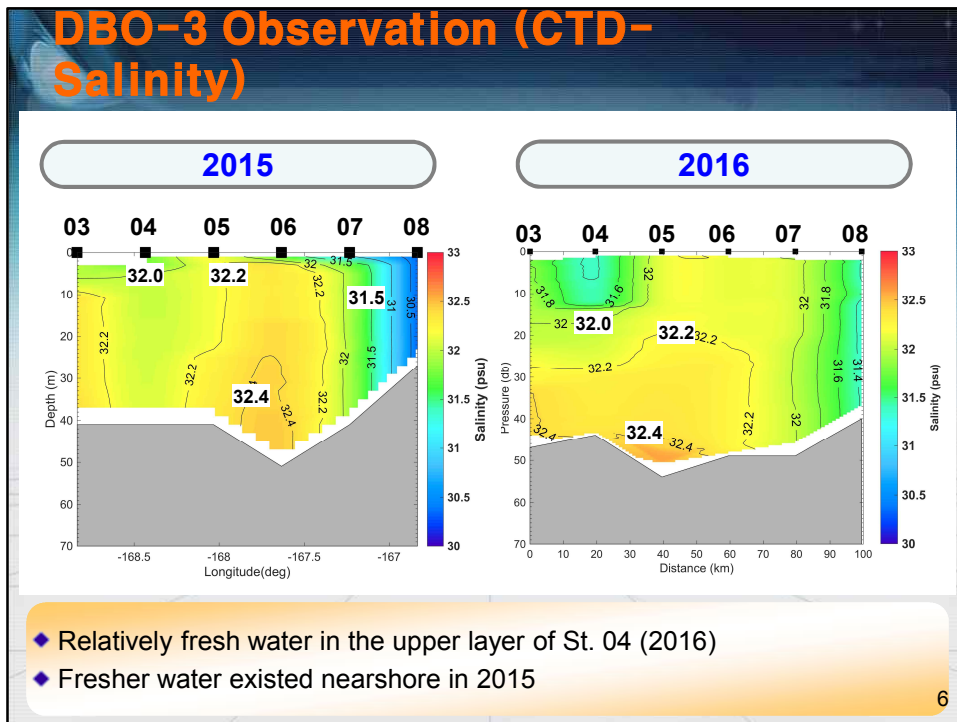
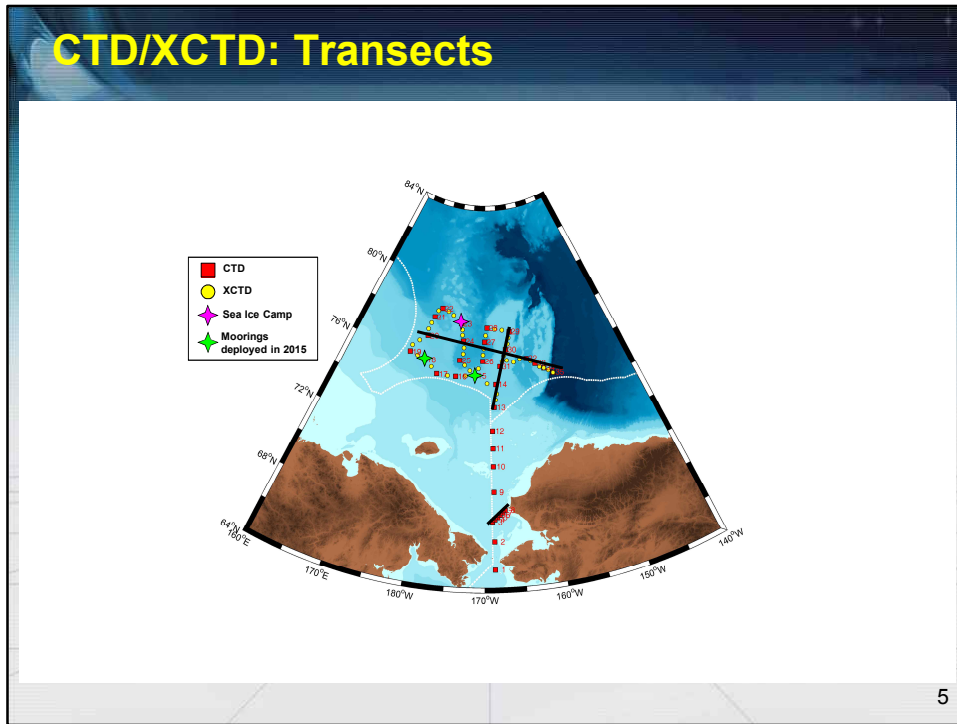
3

## CTD/XCTD: $\theta$ -S Diagram



- ◆ Less melt water existed in 2016
- ◆ PWW depth in 2016 slightly became deeper than 2015

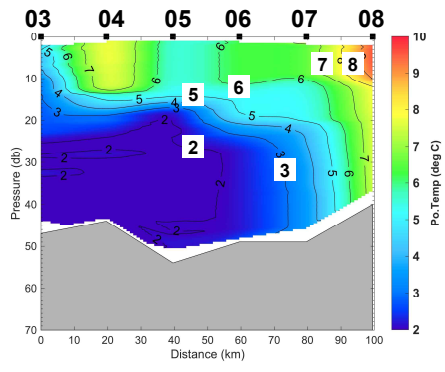
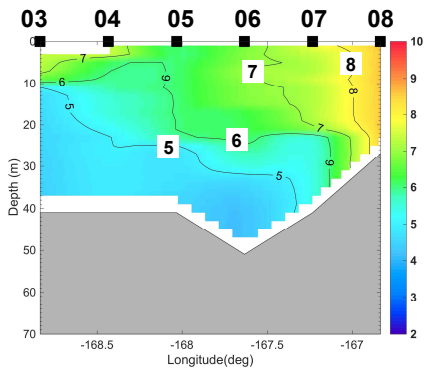
4



## DBO-3 Observation (CTD-Temperature)

2015

2016



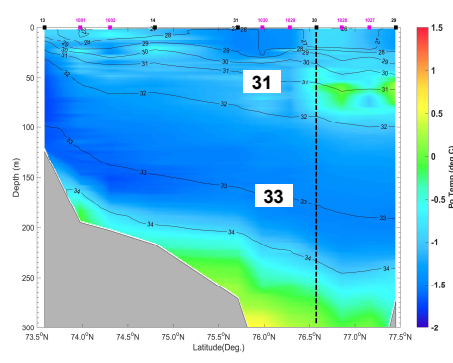
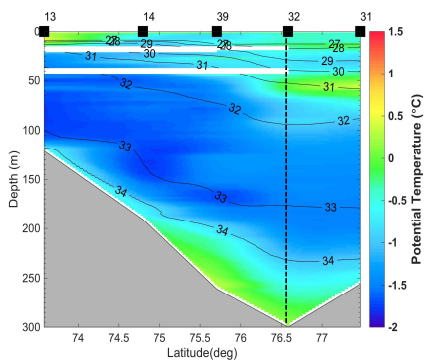
- ◆ Cold water (< 3 deg C) in the lower layer of St.03 ~ St.06 in Aug. 2016
- ◆ Relatively warm water in the upper layer of St.04 in Aug. 2016

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## CP Observation (CTD-T, S)

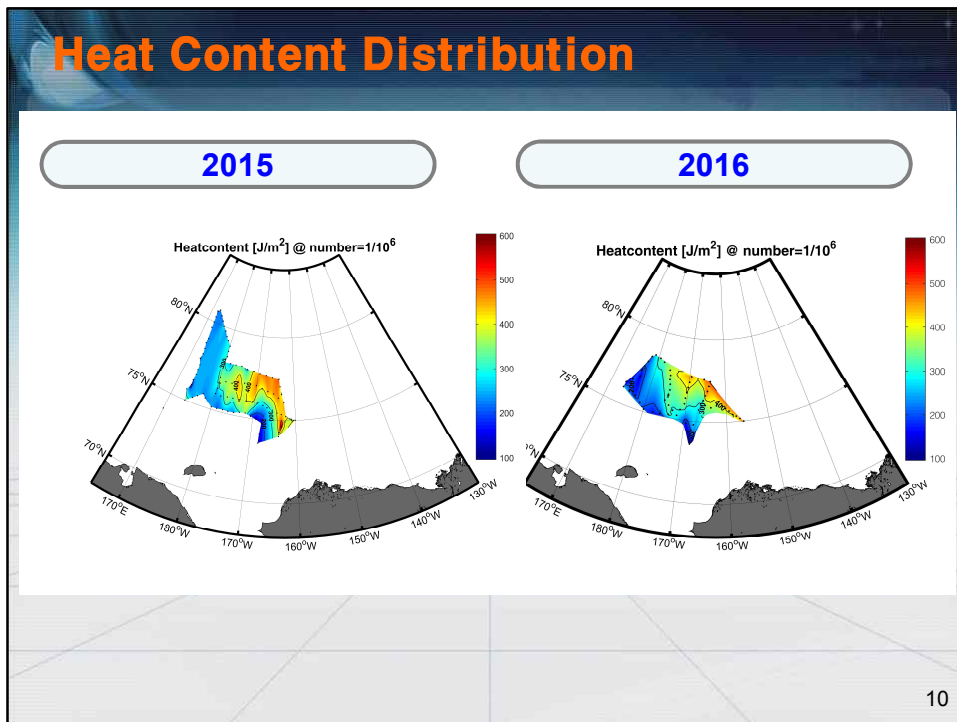
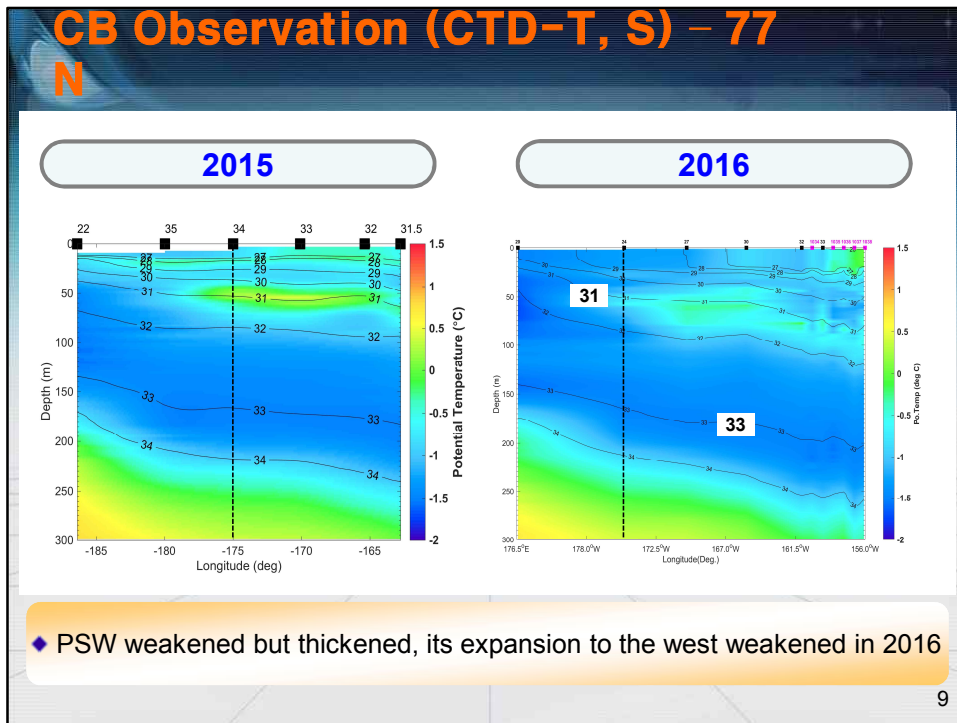
2015

2016

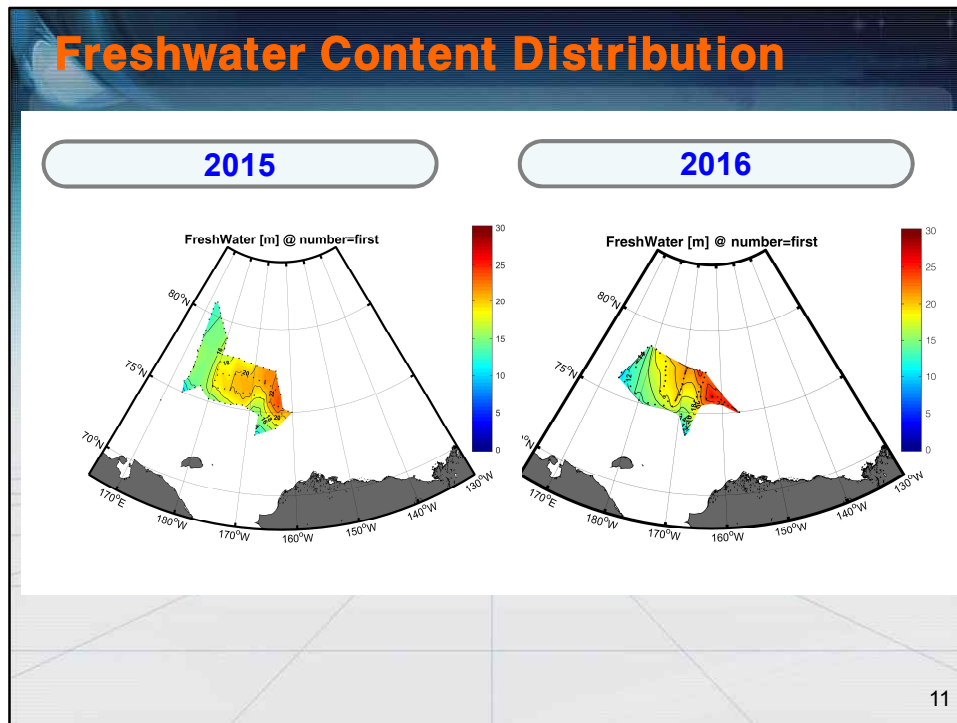


- ◆ SML deepened, STM weakened, PSW weakened but thickened in 2016

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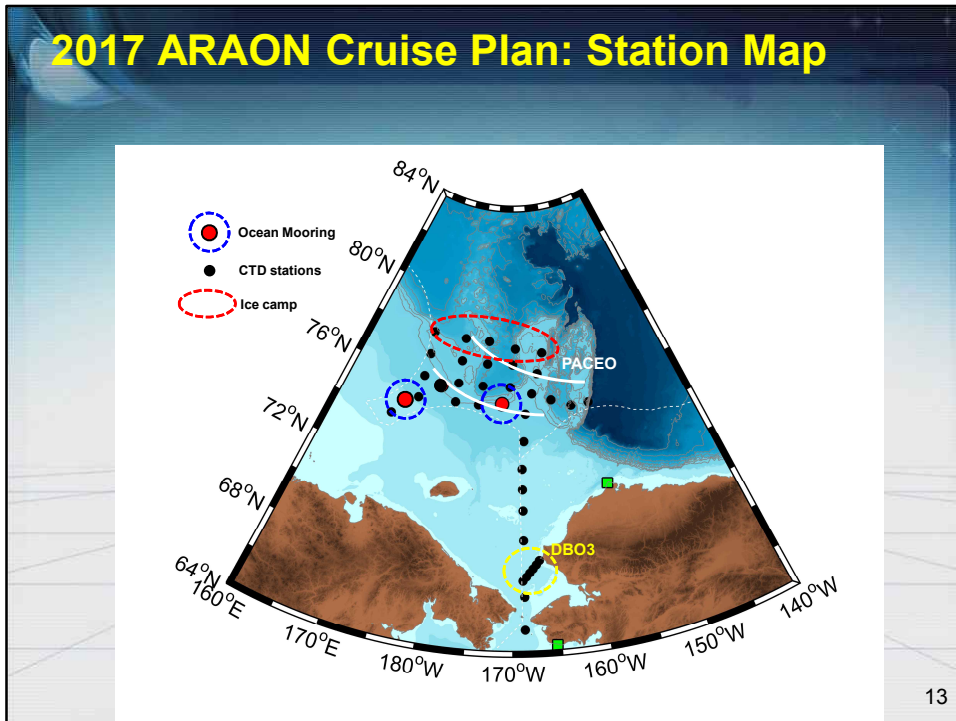


## Future Work

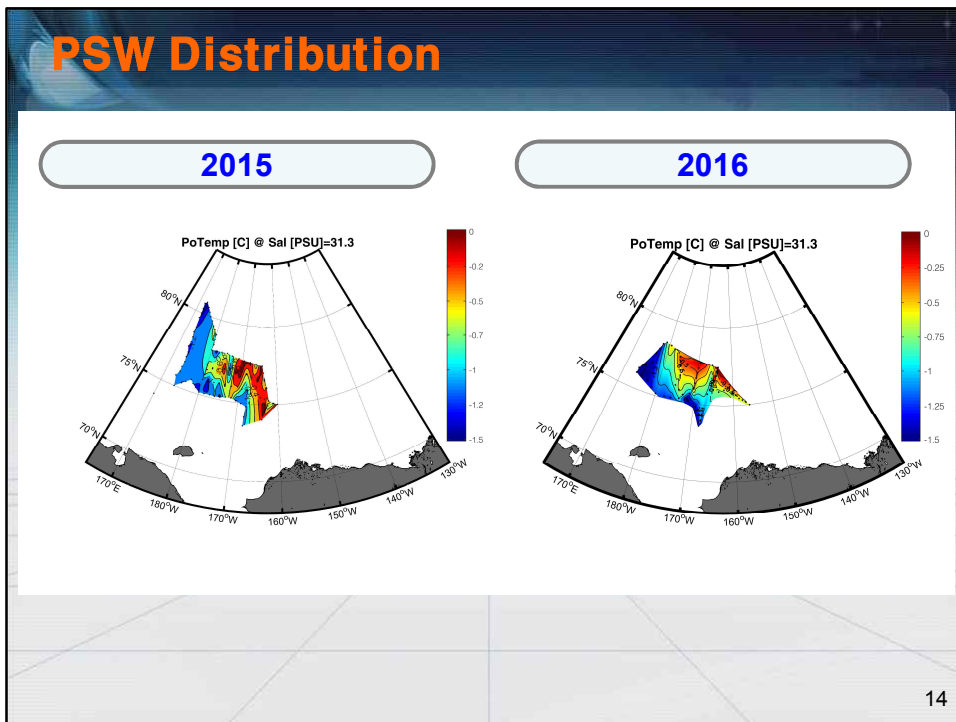
- 1) Analyses of observation data are ongoing: Lowered ADCP, long-term mooring data, and so on.
- 2) Relationships among atmospheric forcing, sea ice motion, and upper ocean circulation will be identified more precisely.
- 3) Arctic surveys will be conducted continuously in order to monitor the variations of Pacific-origin waters around the Chukchi Borderland and even East Siberian Sea.

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## 2017 ARAON Cruise Plan: Station Map

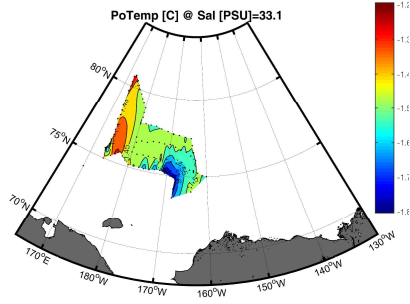


## PSW Distribution



# PWW Distribution

2015



2016

