R/V Mirai Arctic Ocean Cruise in 2015 "Observational Studies on the Arctic Ocean Climate and Ecosystem Variability"

5 Sep. to 3 Oct., 2015 (Bering St. - Arctic Ocean - Bering St., 29 days)

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## 2015 R/V Mirai cruise plan based on recent research products



### Sea ice and SST on 11 Sep 2015





## **Topography with observed stations**



### **Target area: warm water plume off Barrow**





#### **Eddy survey using GPS buoy**



### Cyclonic warm eddy: water characteristics



## Cyclonic warm eddy: turbulent mixing and double diffusion



72.2"N

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[From Dr. Kawaguchi]

# Fixed-point observation 1 (FPO1) to capture an eddy transit showing a fine structure of the eddy



# Fixed-point observation 1 (FPO1) to capture an eddy transit showing a fine structure of the eddy



[From Dr. Kawaguchi]

# Sediment trap deployments to study the difference of particles between the upstream and downstream of the eddy passage



[From Dr. Onodera]

### Hydrographic survey around the NHC-15t sediment trap site



## Search and lost of SCH-14 mooring and cancels of DBO 3 and other hotspot observations



