

# Highlights of DBO 2010-2017 data time series: *Physical oceanography*

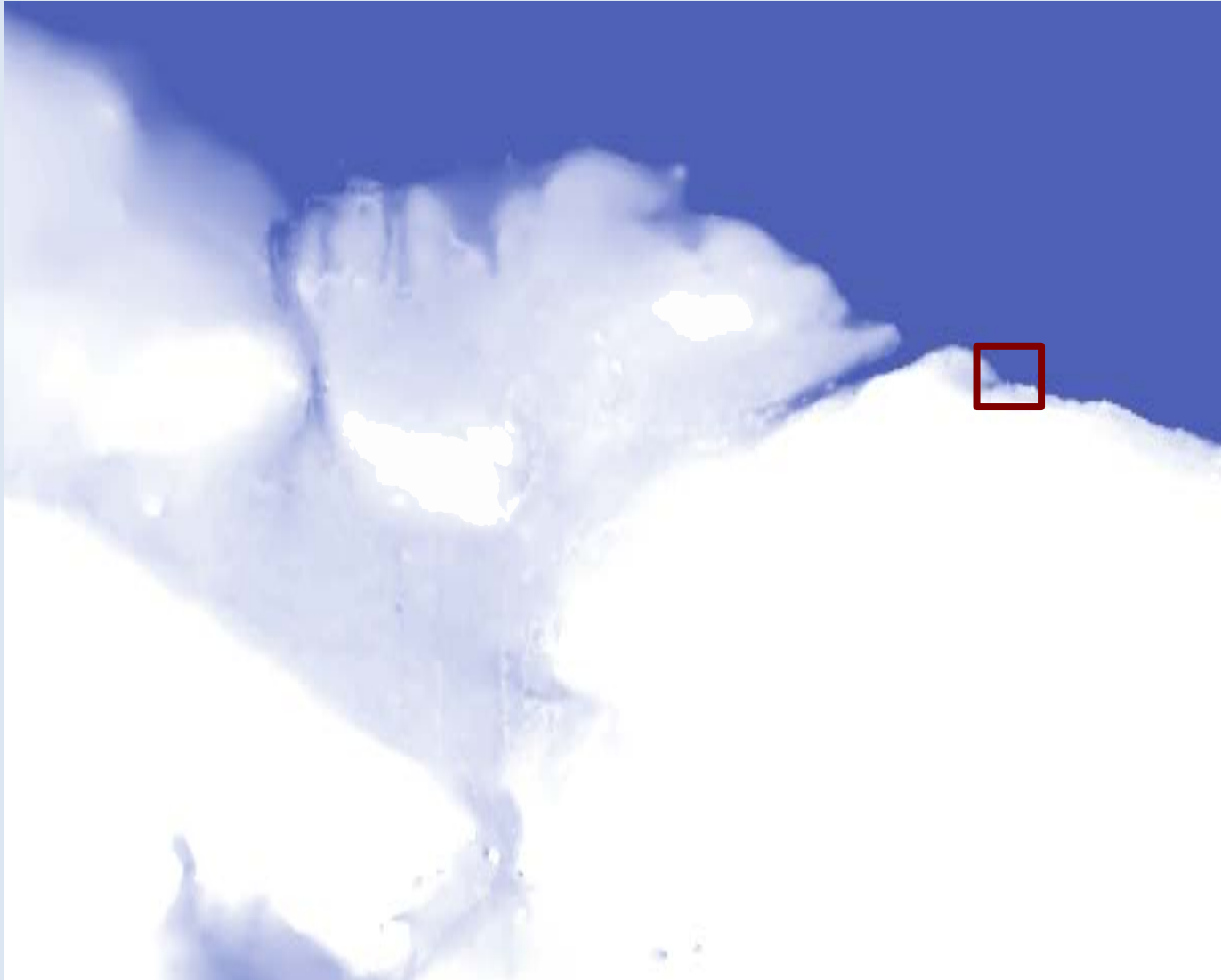
*Leah McRaven and Robert Pickart*

Woods Hole Oceanographic Institution



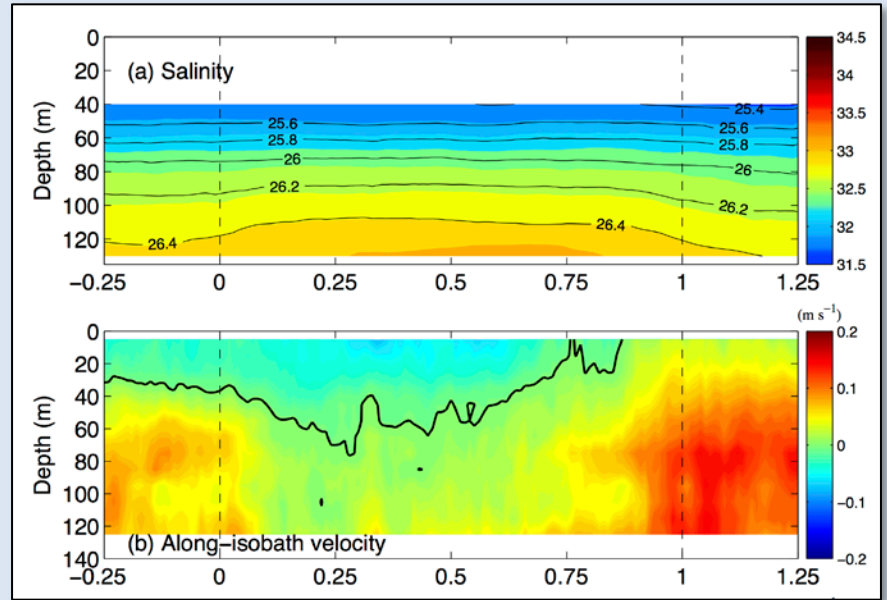
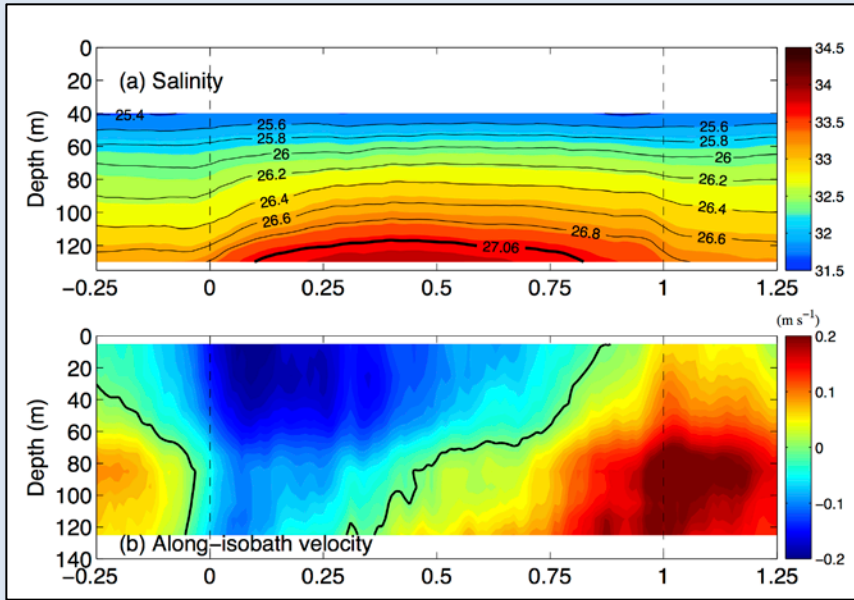
## DBO6 – Beaufort Sea Shelfbreak

Characteristics and Dynamics of wind-driven upwelling in the Alaskan Beaufort Sea based on six years of mooring data (Lin et al. 2017)



# DBO6 – Beaufort Sea Shelfbreak

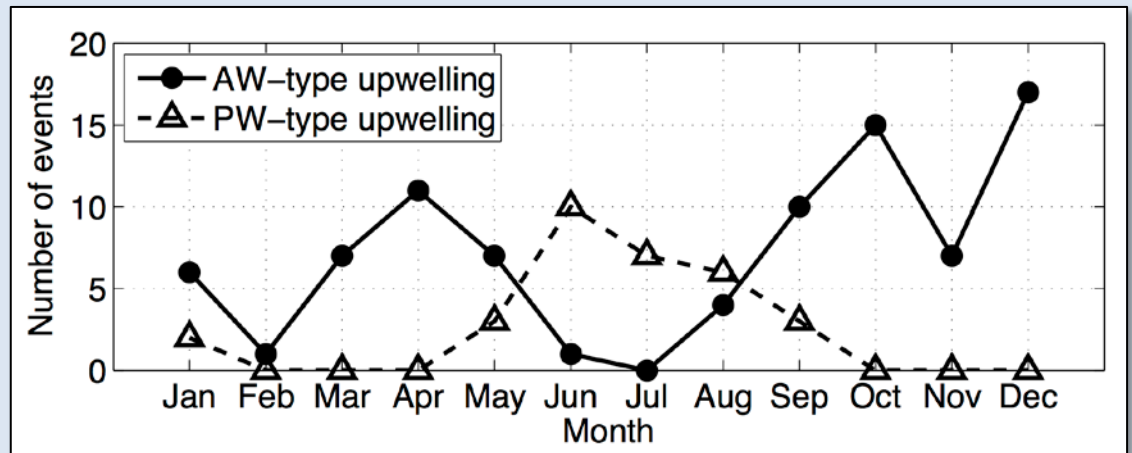
## AW vs. PW upwelling composites



Atlantic water (**AW**) upwelling event  
85 of 115 events – Peak in spring and fall

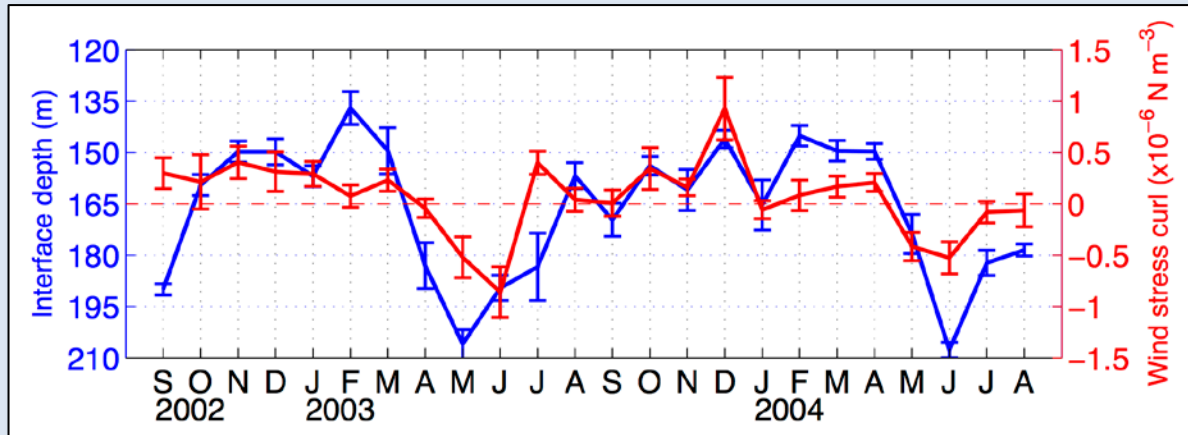
Pacific water (**PW**) upwelling event  
30 of 115 events – Peak in summer

Notably, the easterly wind strength is, on average, the same for both types of events.

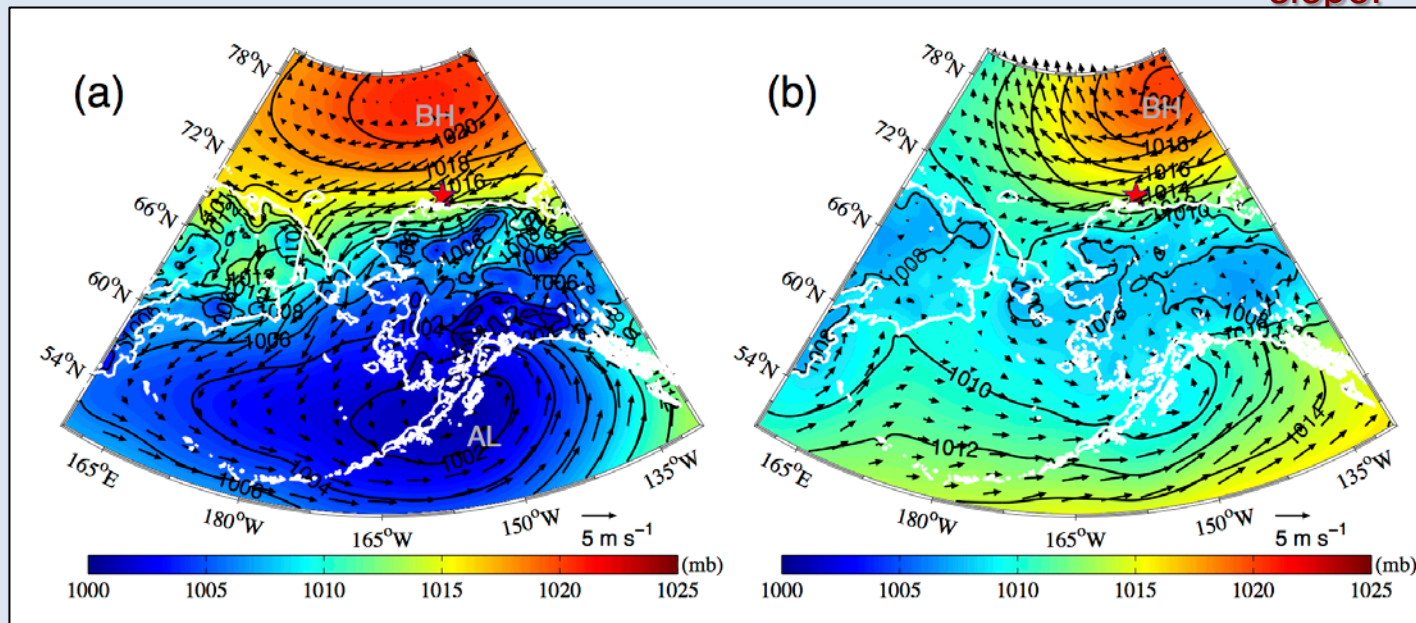


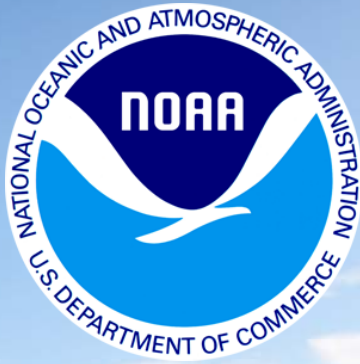
# DBO6 – Beaufort Sea Shelfbreak

*AW vs. PW upwelling and wind*



The two atmospheric centers of action – the Beaufort High and the Aleutian Low – control the annual variation of local wind stress curl, which in turn alters the **PW-AW** interface depth and dictates the type of upwelling that occurs on the Beaufort slope.





**BOEM**  
BUREAU OF OCEAN ENERGY MANAGEMENT

*Thank you!*

