The Eastern Bering Sea:

Comparison between a cold period (2007 – 2010) and a warm period (2001 – 2005)

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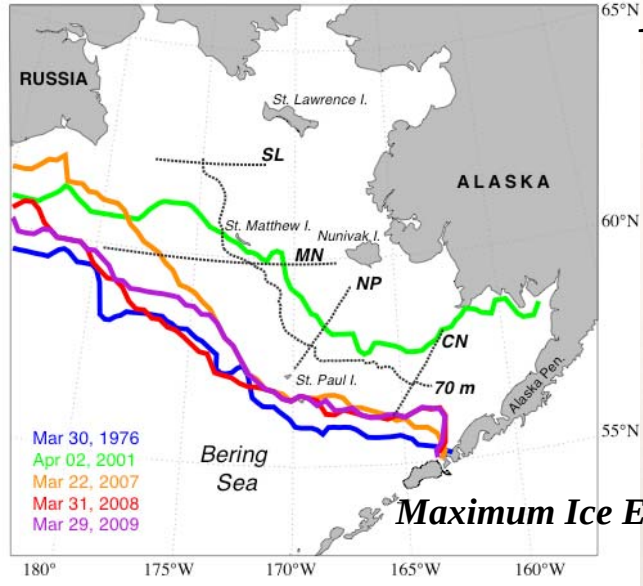
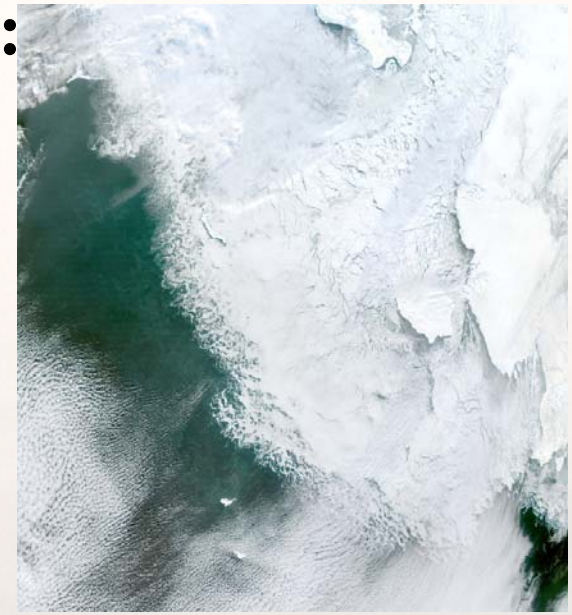
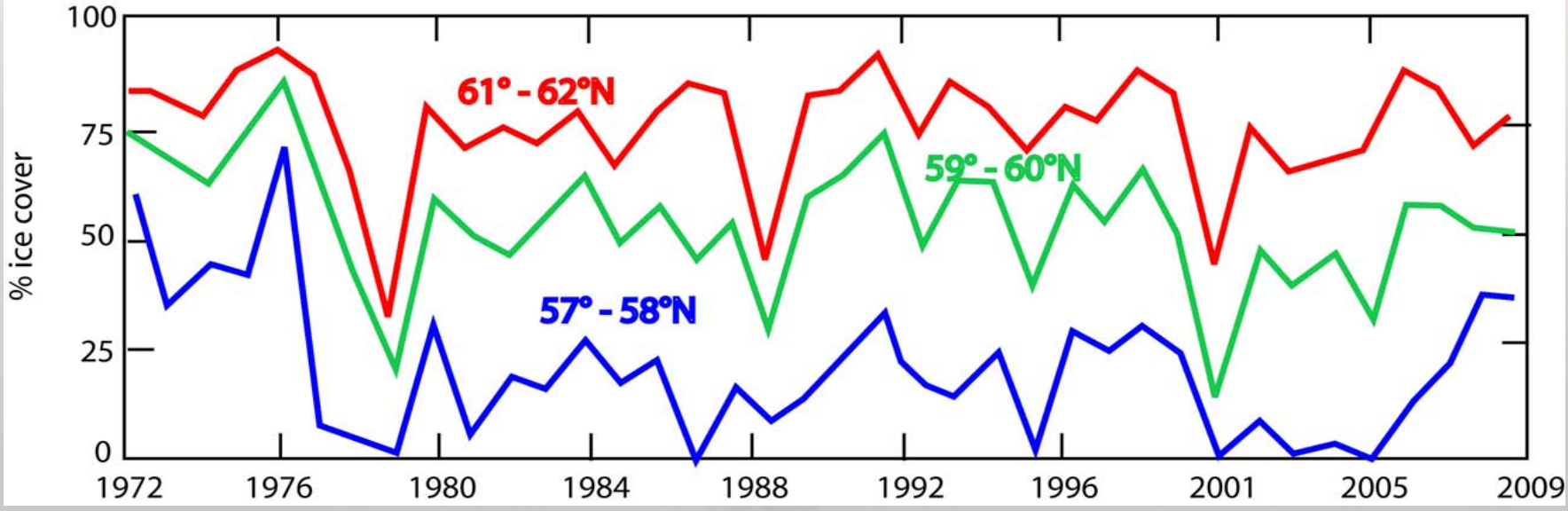
The Bering Sea: Sea Ice



Maximum Ice Extent



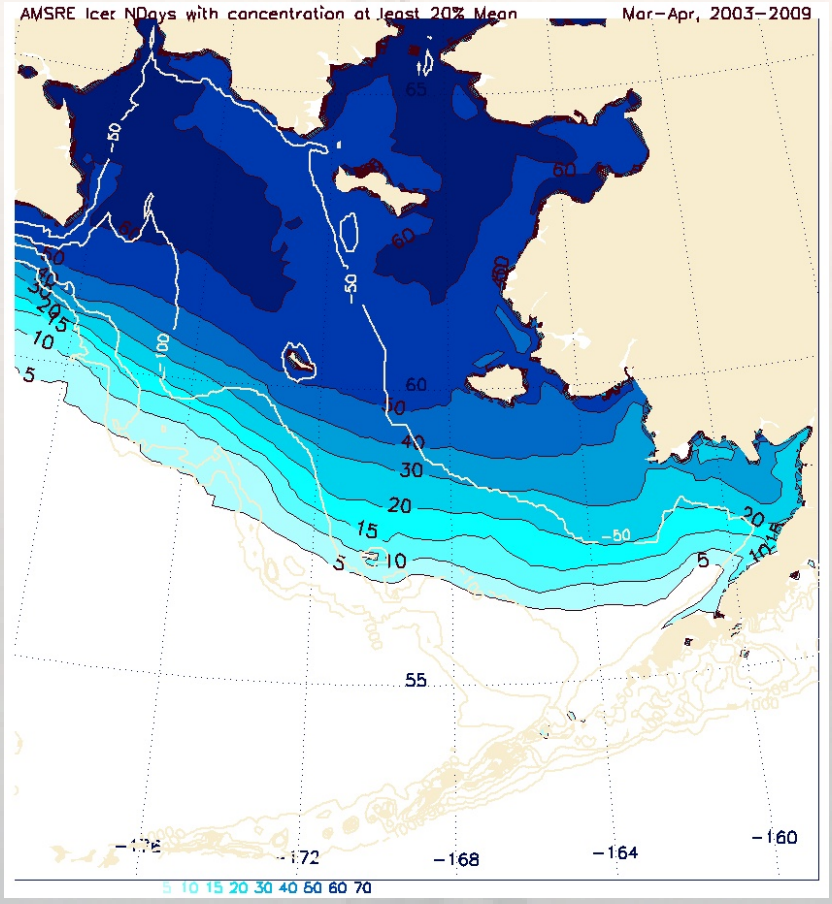
Index of ice duration in north, central and south



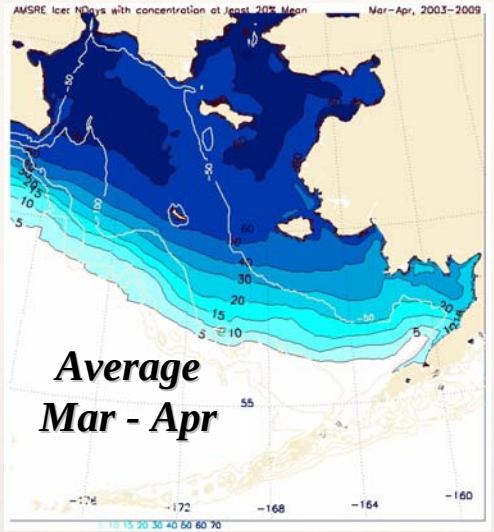
Sea Ice:

Average number of days in which ice was present

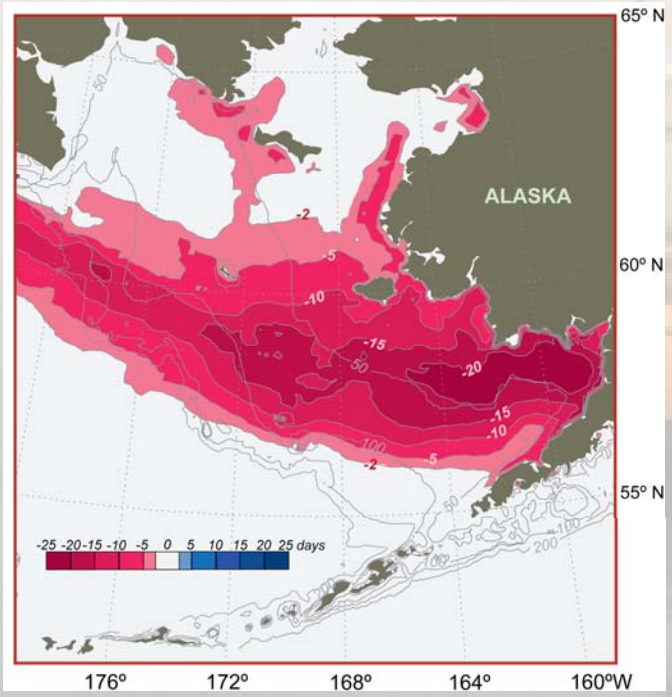
March - April



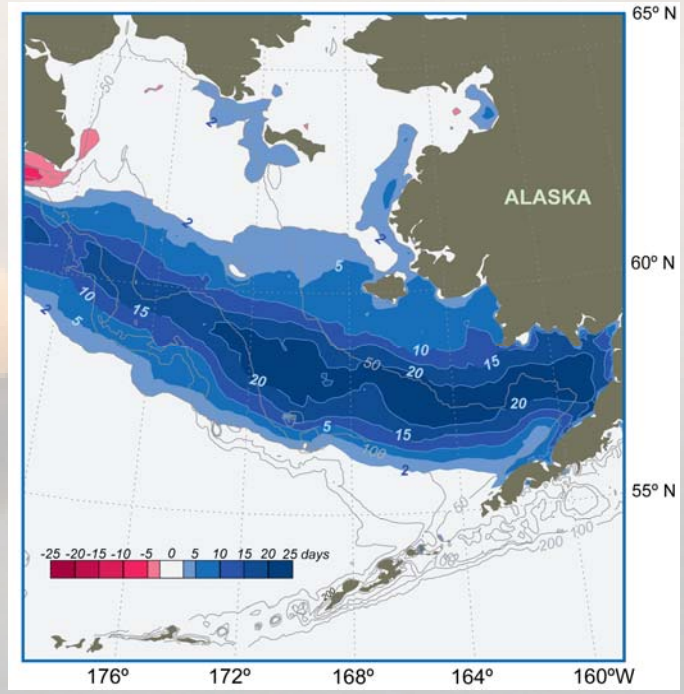
Sea Ice



Differences in number of days of ice cover in March and April during **warm** and **cold** years



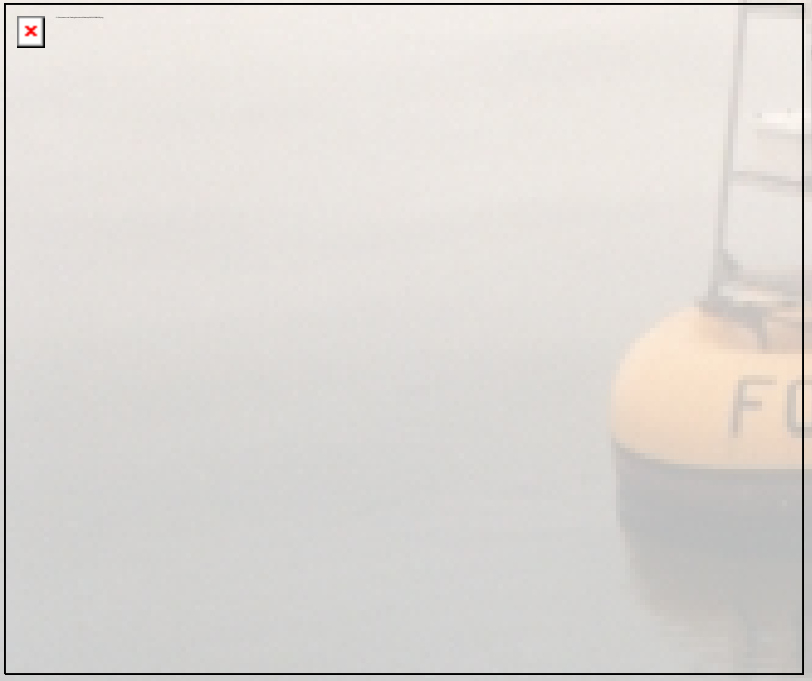
Warm (2003-2005)

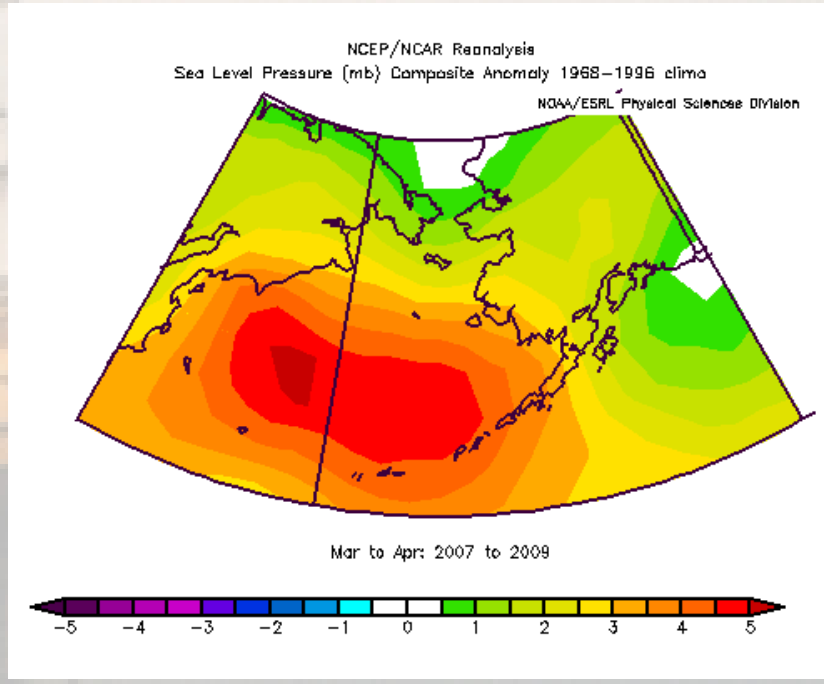


Cold (2007-2009)

Sea Level Pressure

(March - April)

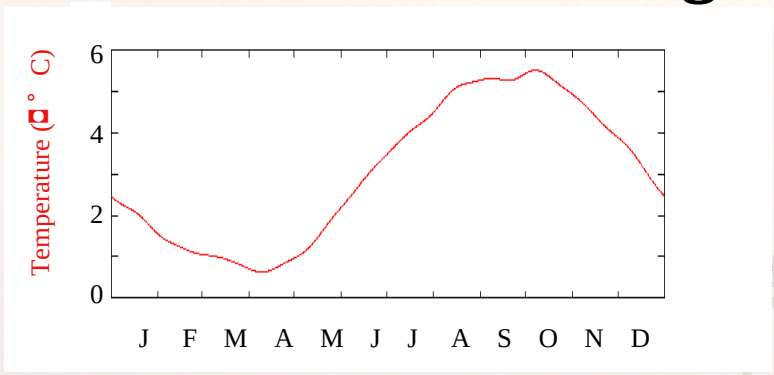


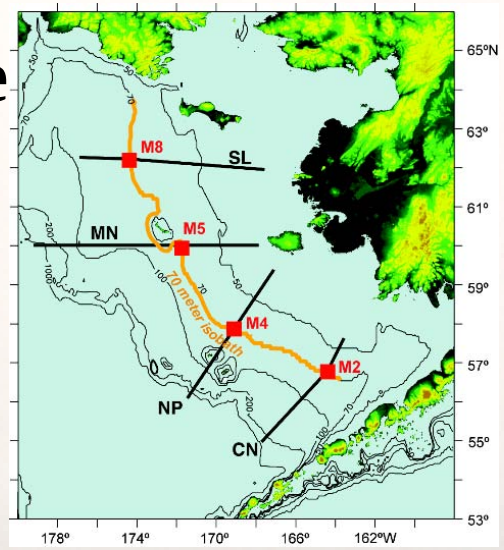


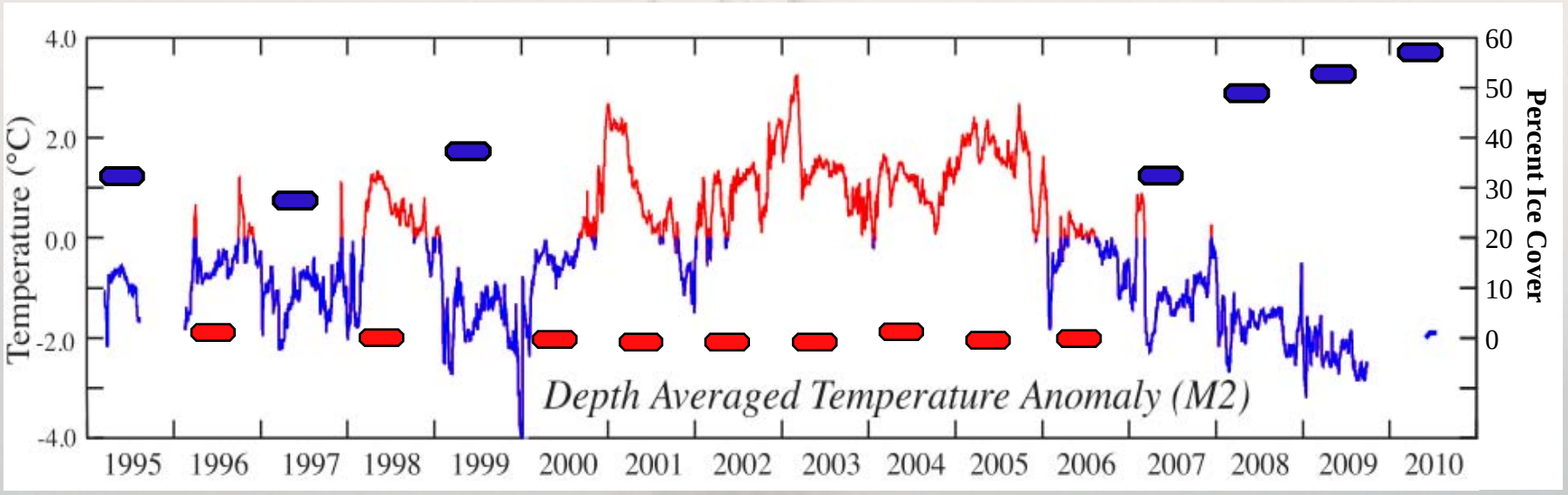
Warm (2000-2005)

Cold (2007-2009)

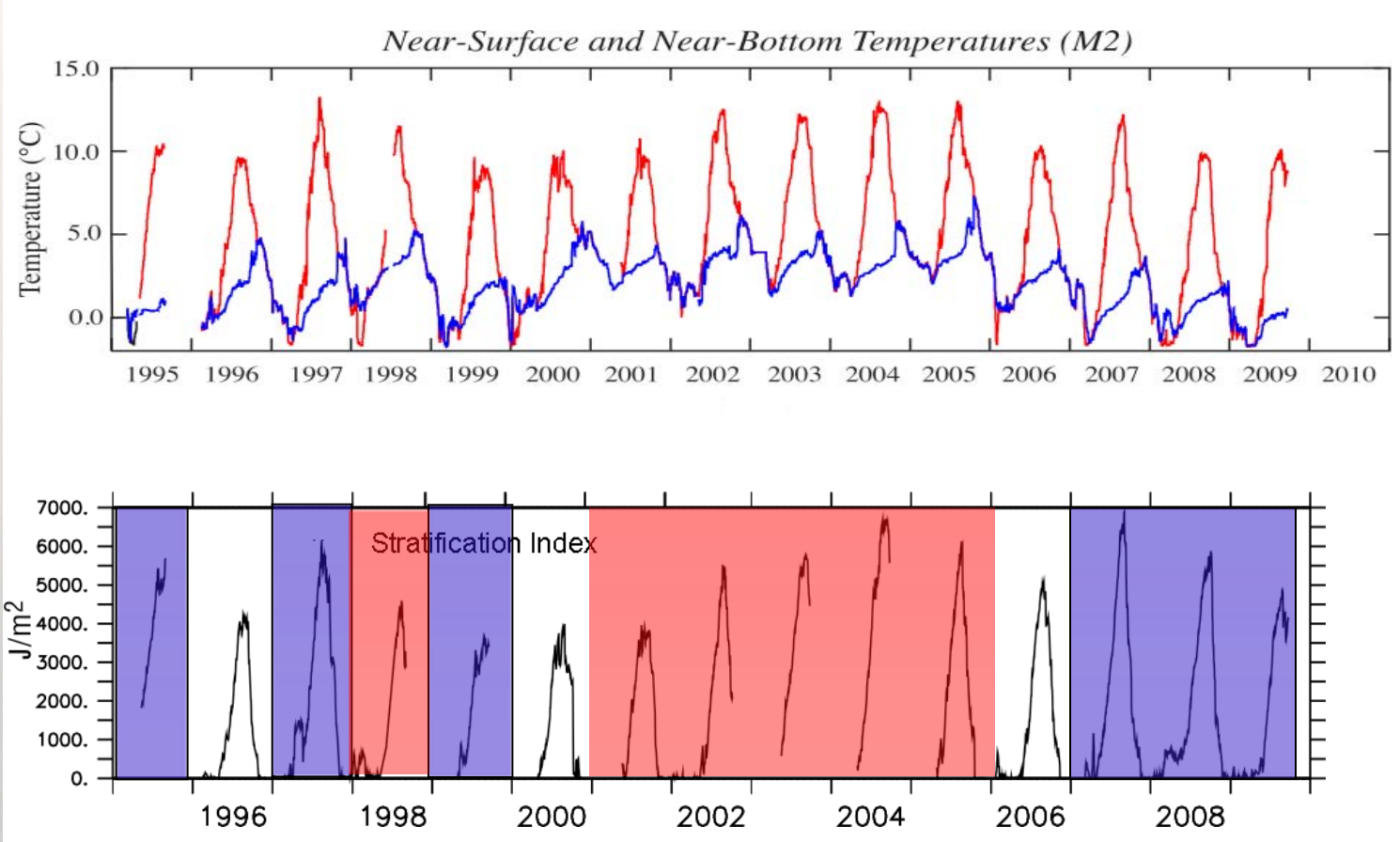
The Bering Sea Temperature







Vertical Stratification at M2

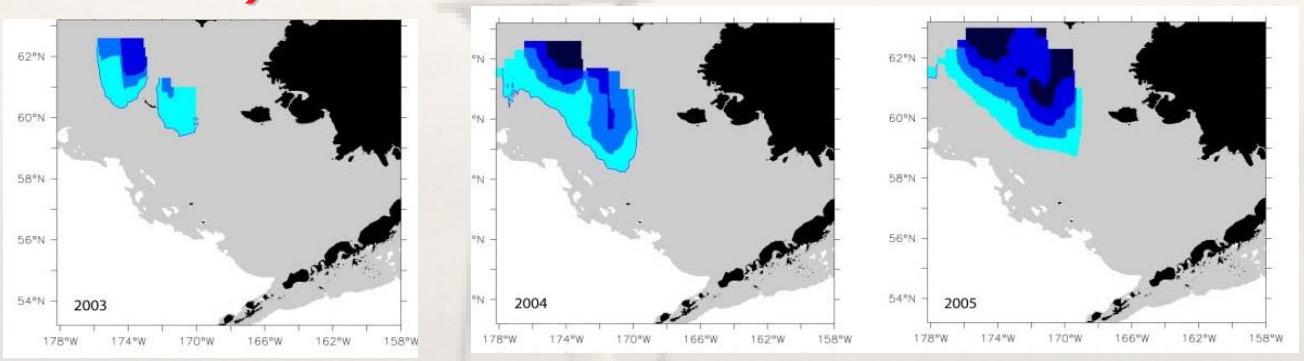


From Ladd and Stabeno, submitted

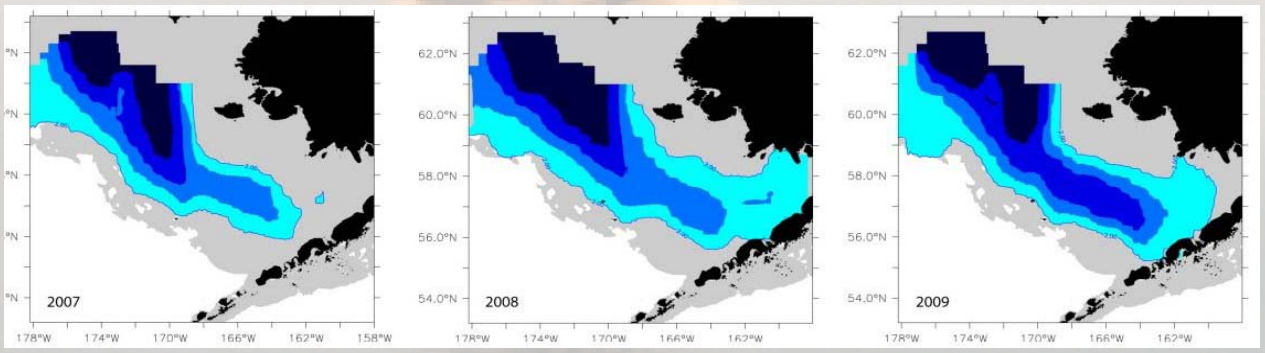
Cold Pool

Differences in the extent of the cold pool in warm and cold years

Warm (2003-2005)

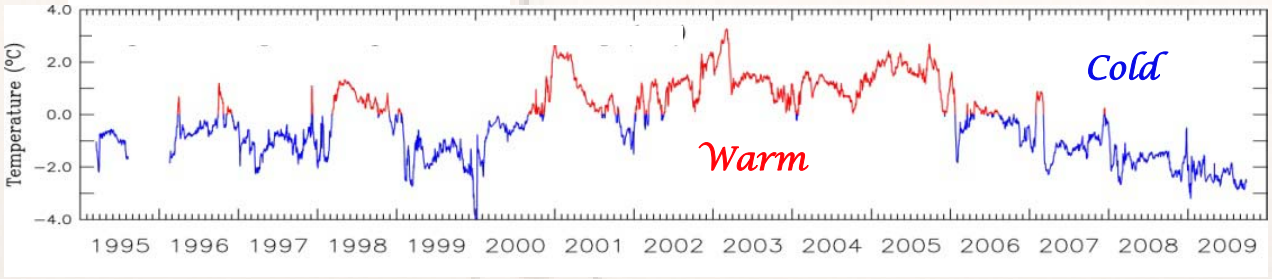


Cold (2007-2009)

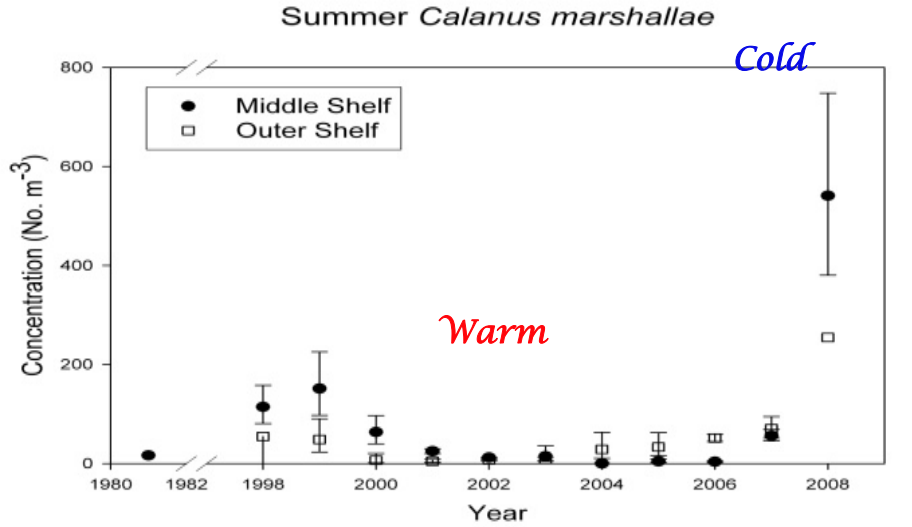


Large Zooplankton

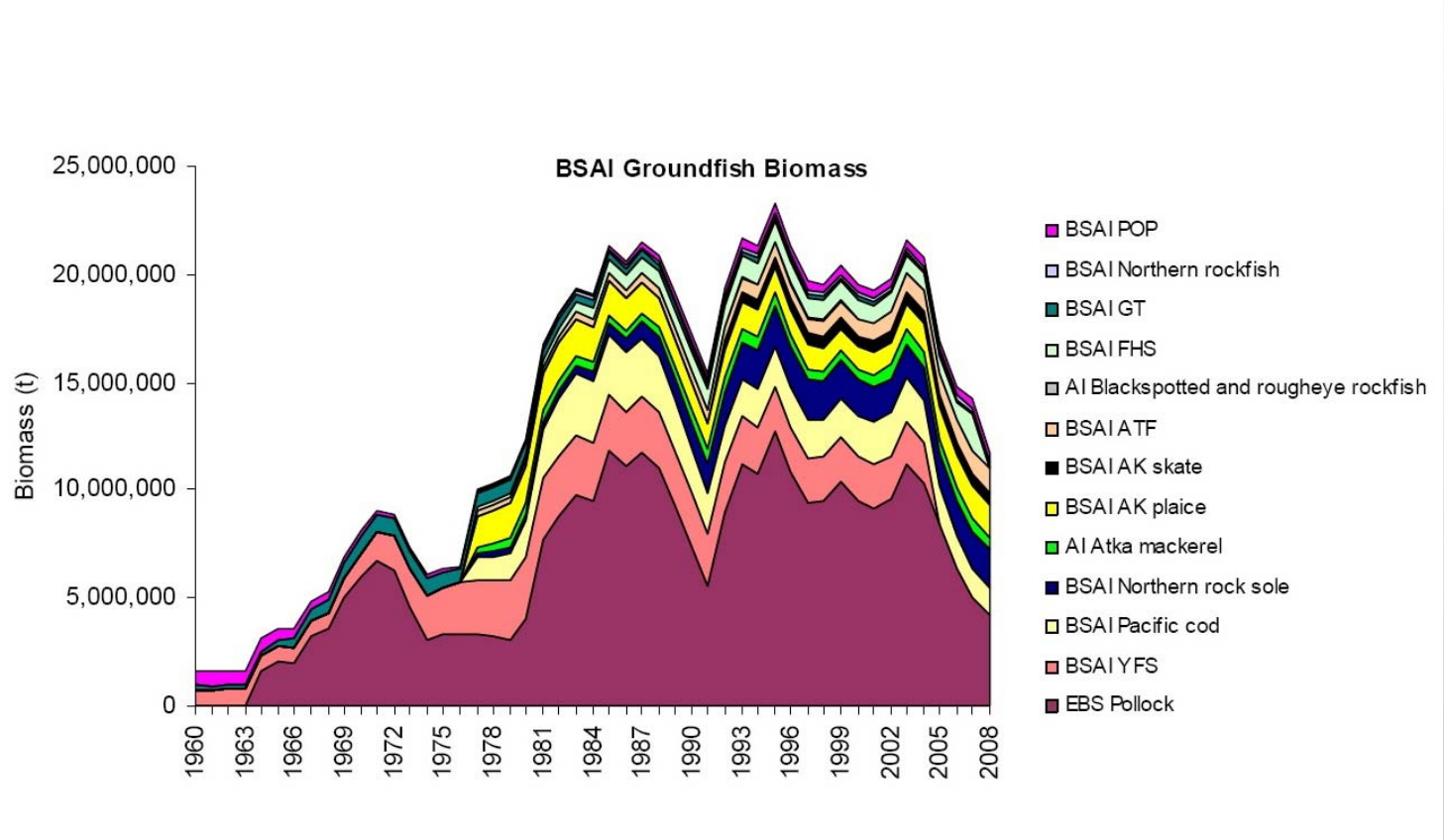
Temperature Anomaly at M2



Large Zooplankton



Groundfish Biomass



NPFMC SAFE Report

Summary

- Northern Bering Sea will remain ice covered and cold during the next 30 - 50 years.
- On the southeastern Bering Sea shelf, sea-ice extent (and hence ocean temperature) can vary significantly from year-to-year
- Vertical stratification is not determined by whether a year is warm or cold.
- Summer population of large zooplankton over the southern shelf were low during warm years.
- Overwintering survival of age-0 pollock was low in warm years over the southern shelf.

Are we eventually heading toward a warmer southeastern Bering Sea shelf and reduced large zooplankton and pollock?