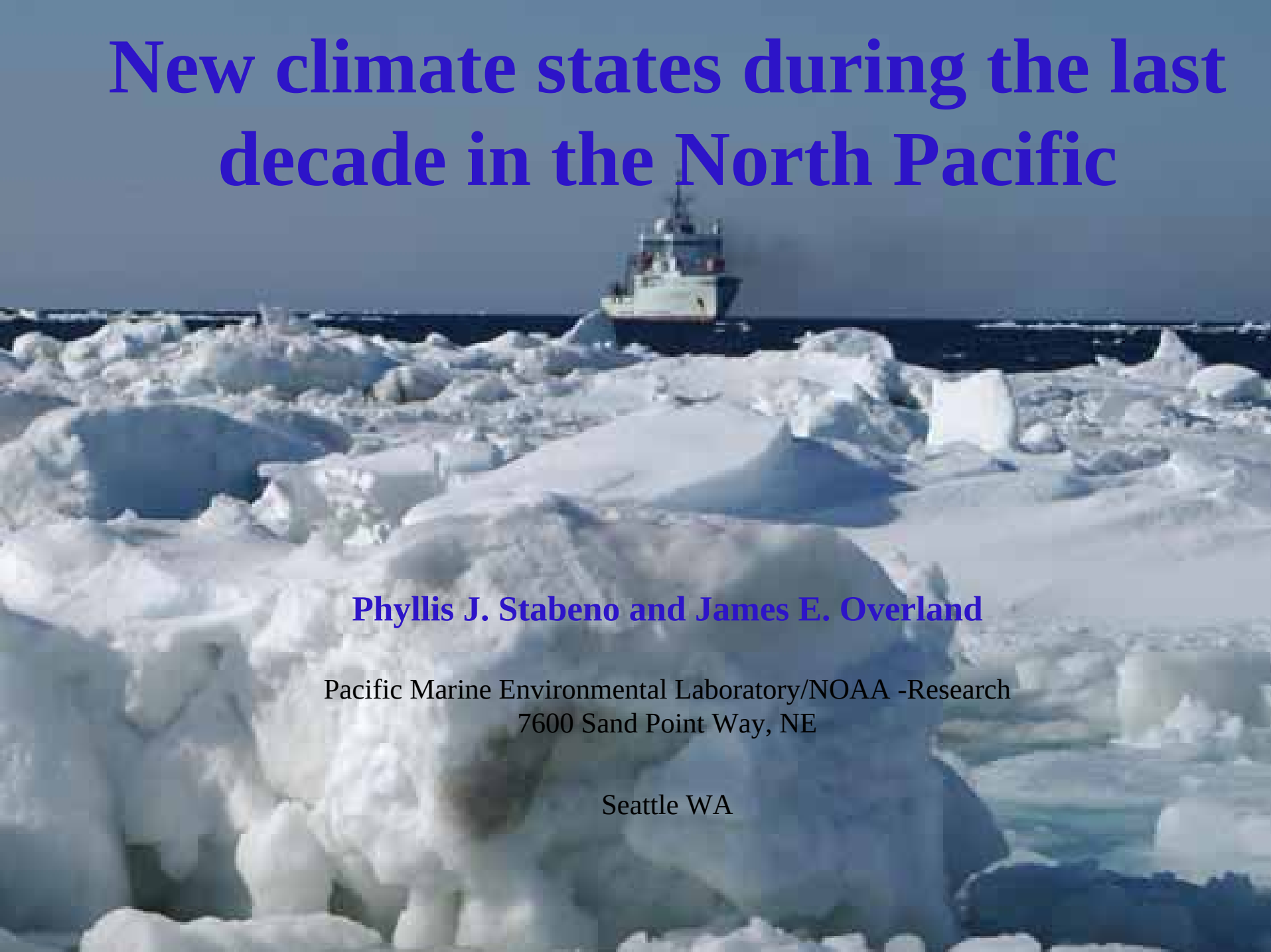
New climate states during the last decade in the North Pacific

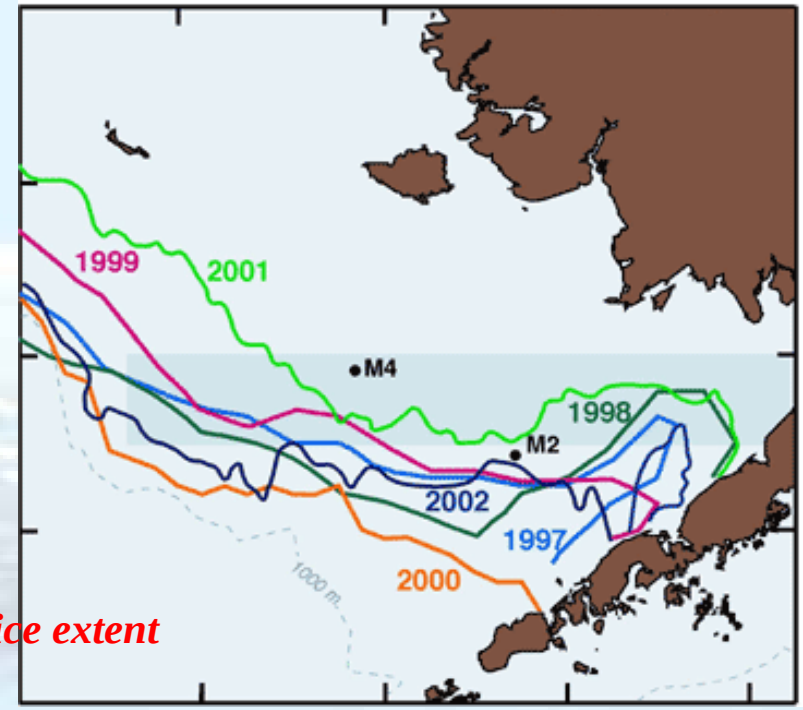


Phyllis J. Stabeno and James E. Overland

Pacific Marine Environmental Laboratory/NOAA -Research
7600 Sand Point Way, NE

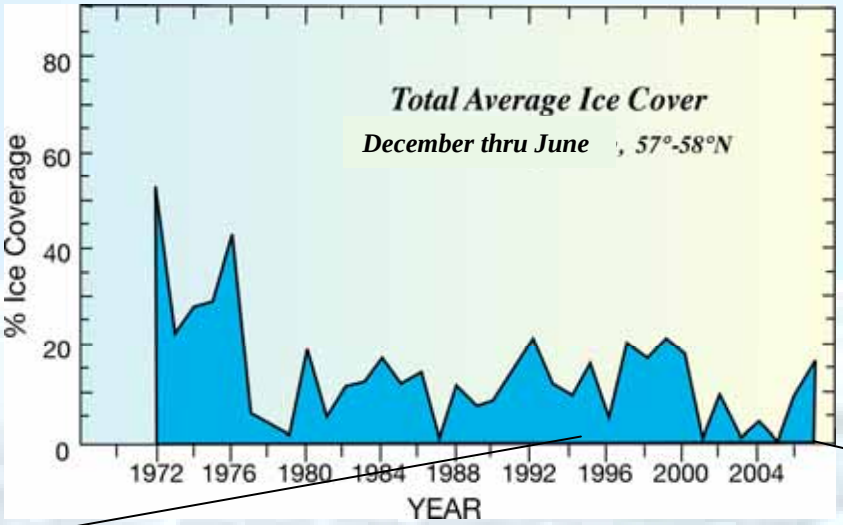
Seattle WA

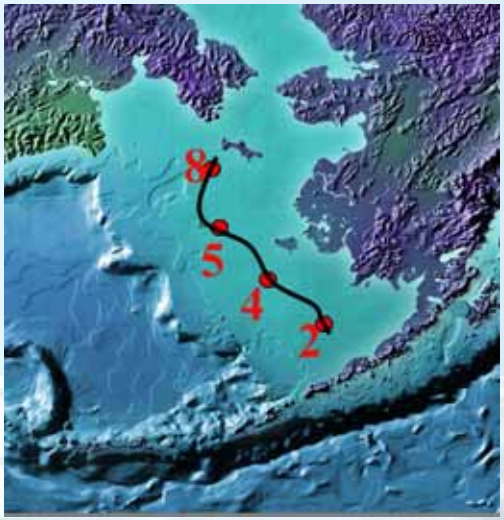
Ice Extent over the Bering Sea Shelf

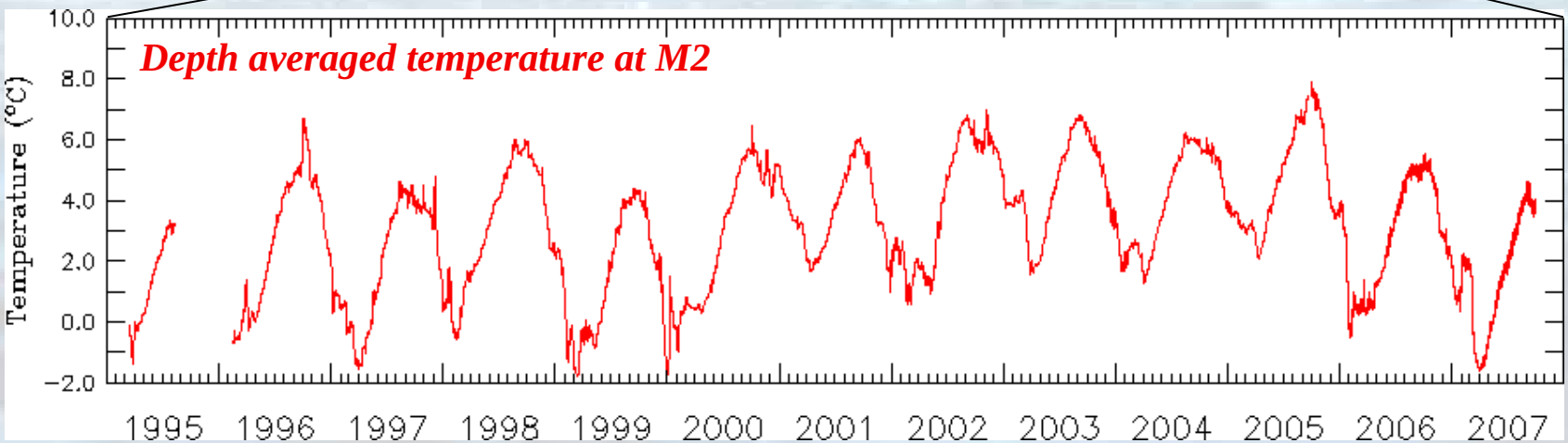


Maximum ice extent

Sea Ice and Depth Averaged Temperature at M2

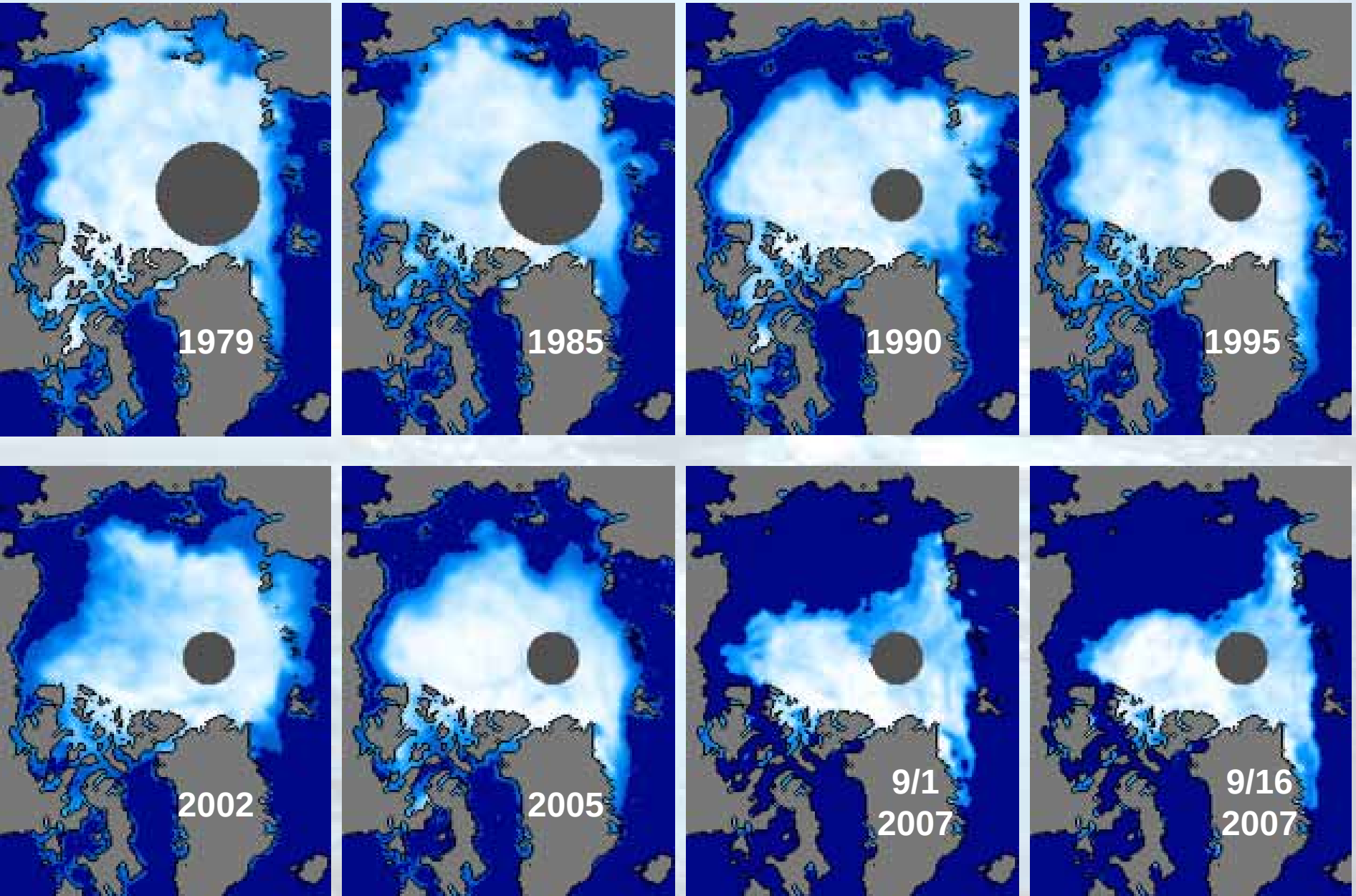




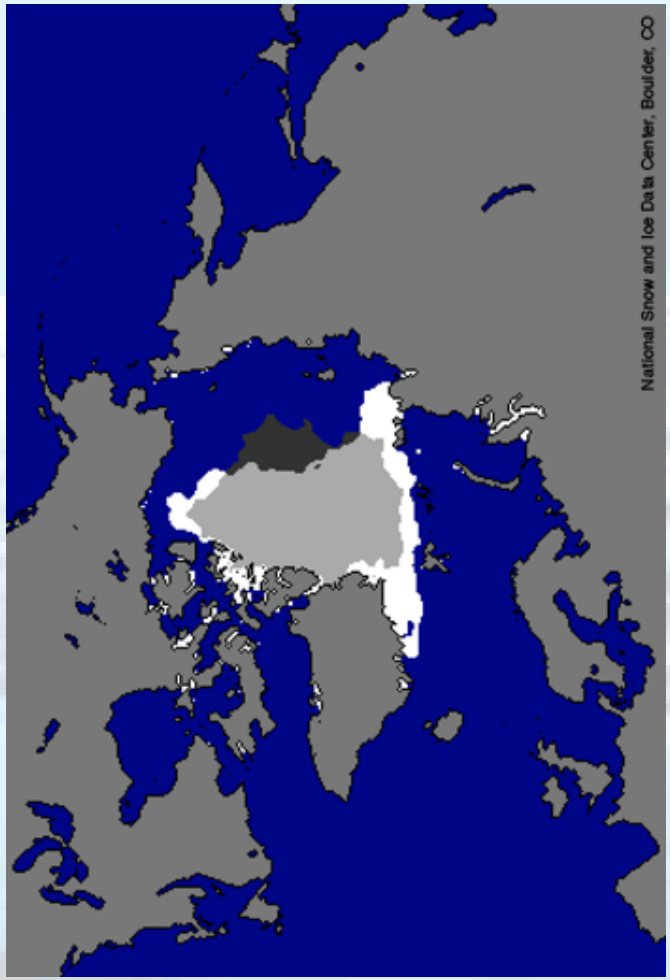


September 1979 sea ice extent and successive September record lows

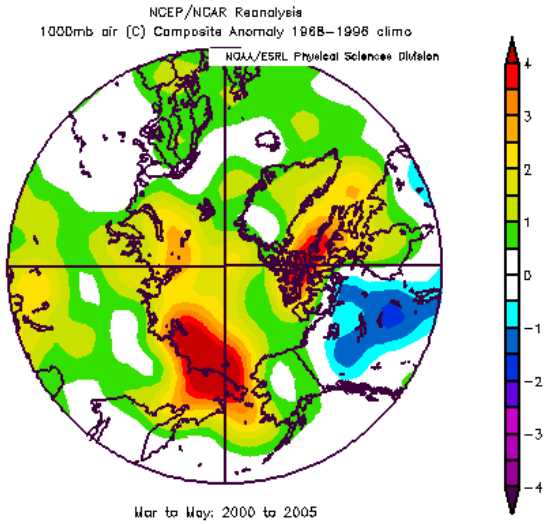
September 2007 monthly average will fall somewhere between the 9/1 and 9/16 images pictured below

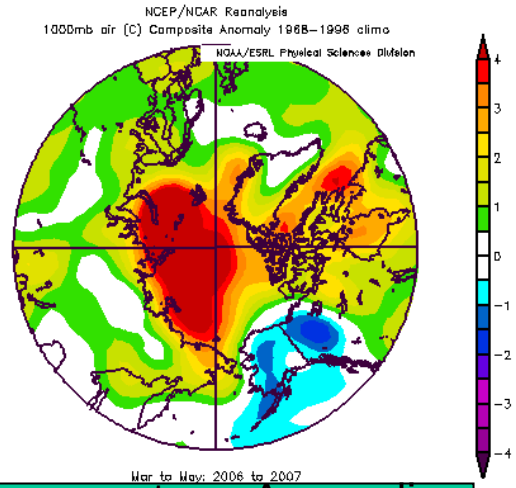


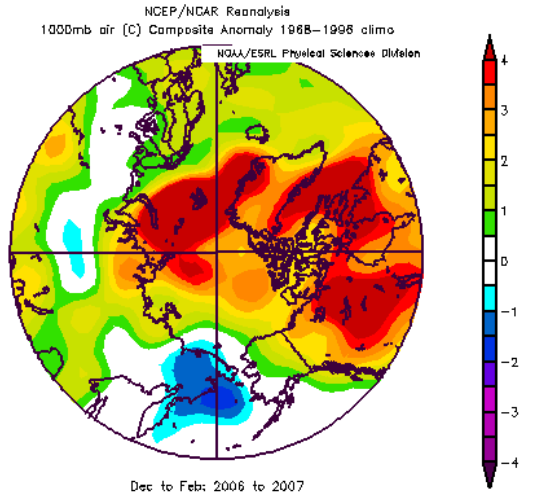
Arctic Sea Ice Extent



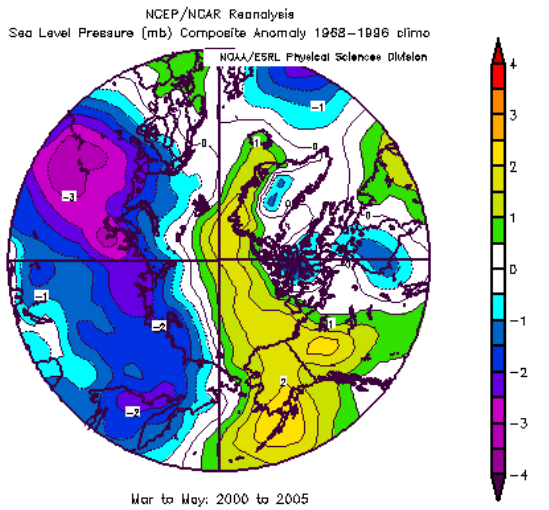
Warm Spring Bering 2000-2005 (Left)
Cold Spring and Winter 2006-2007 (Center and Right)
Rest of Arctic Stays Warm!

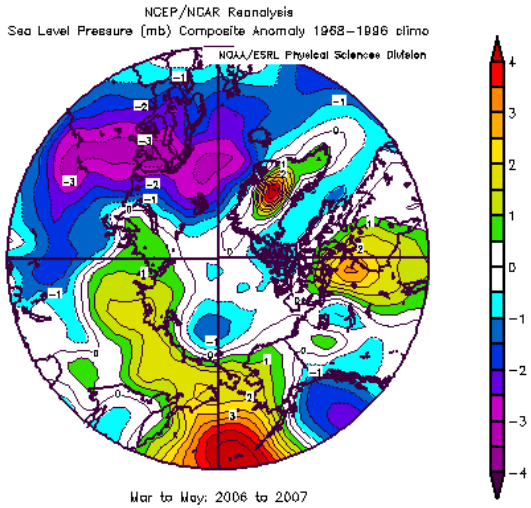


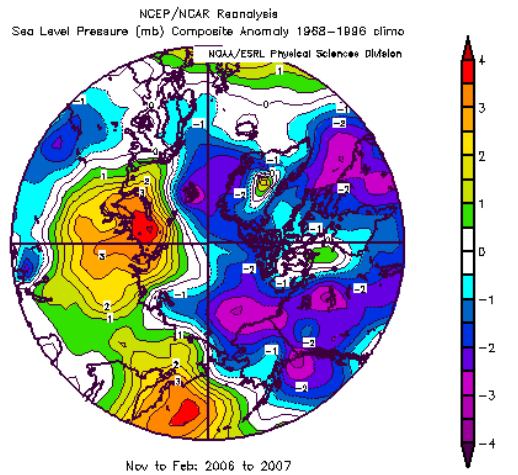




Temperature Anomalies



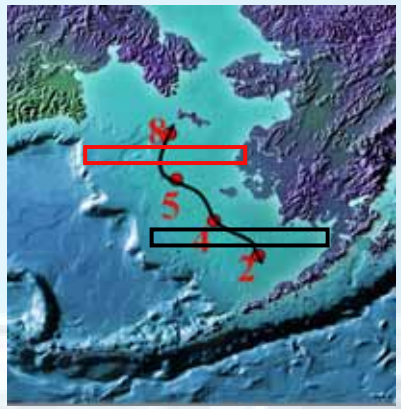


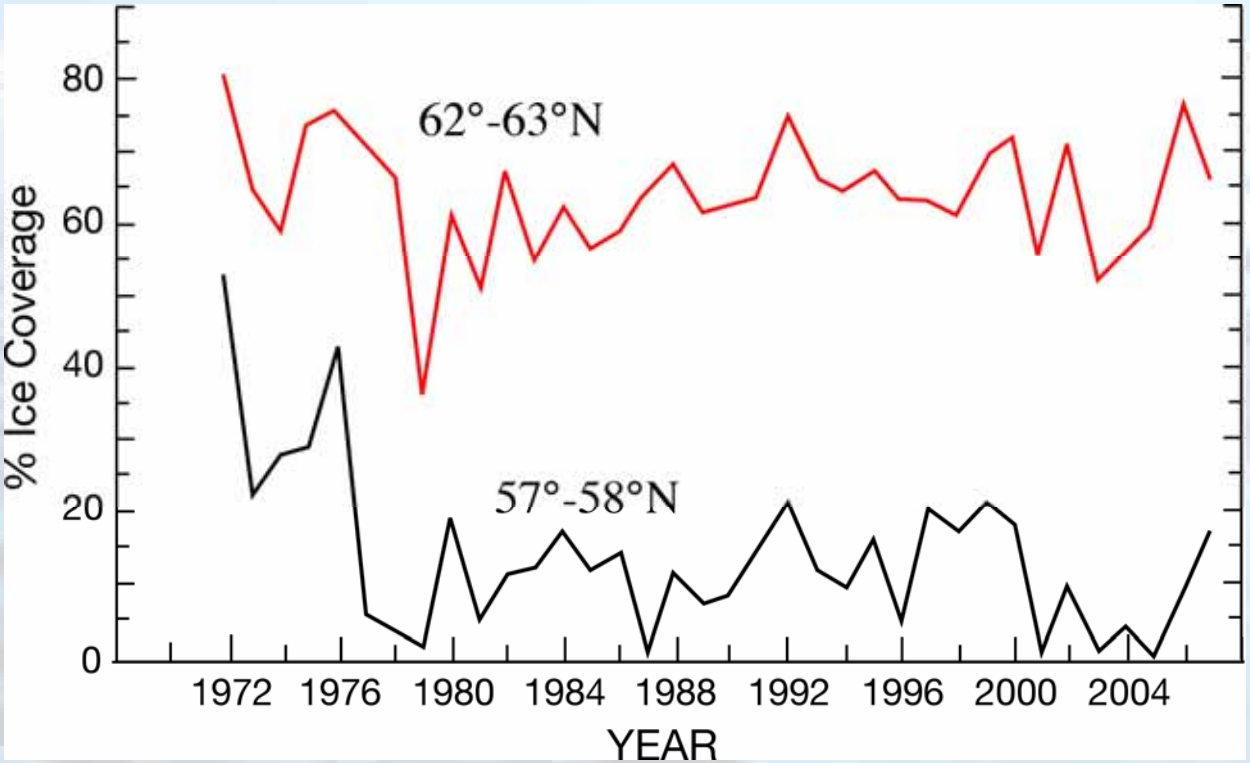


Sea Level Pressure Anomalies

Indices of Ice Extent over the Eastern Bering Sea Shelf

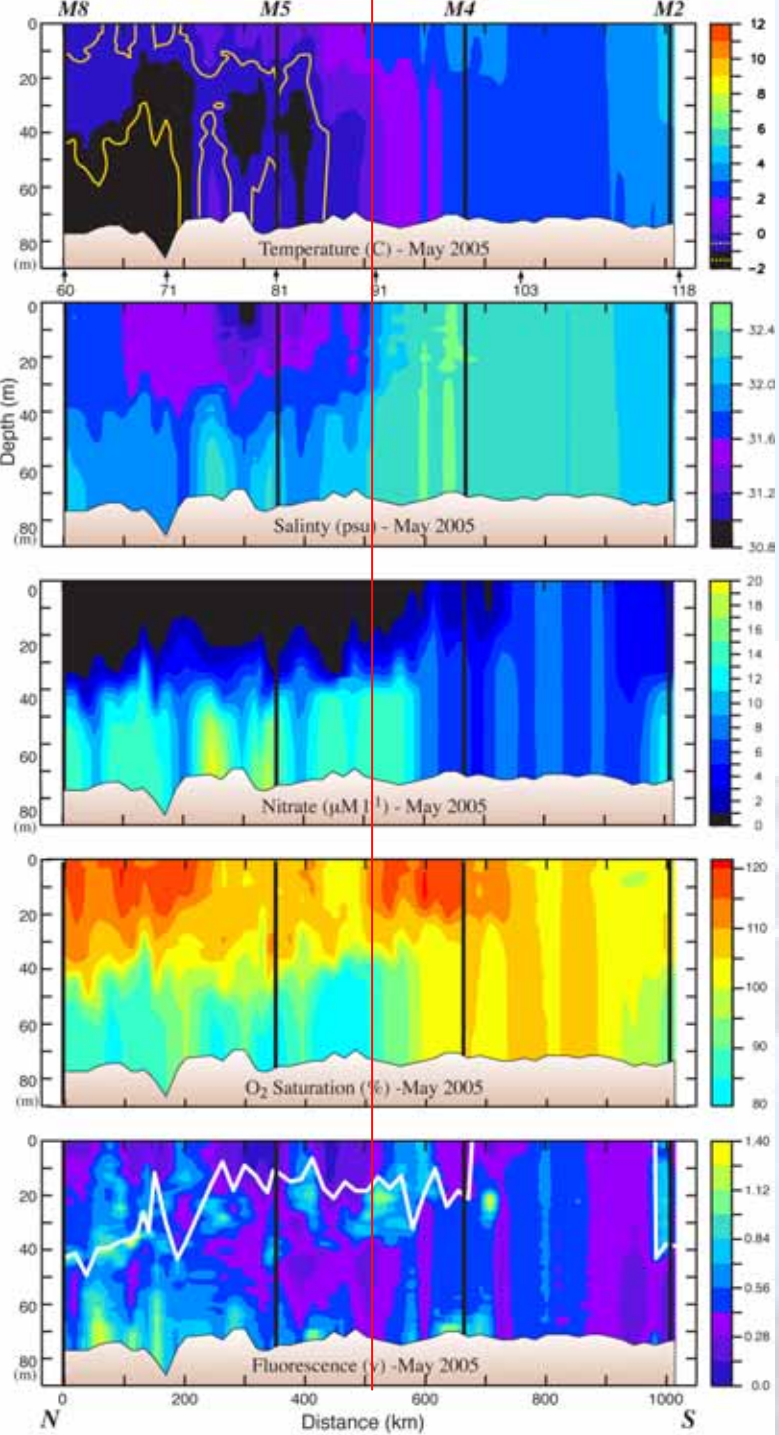
(December-June)



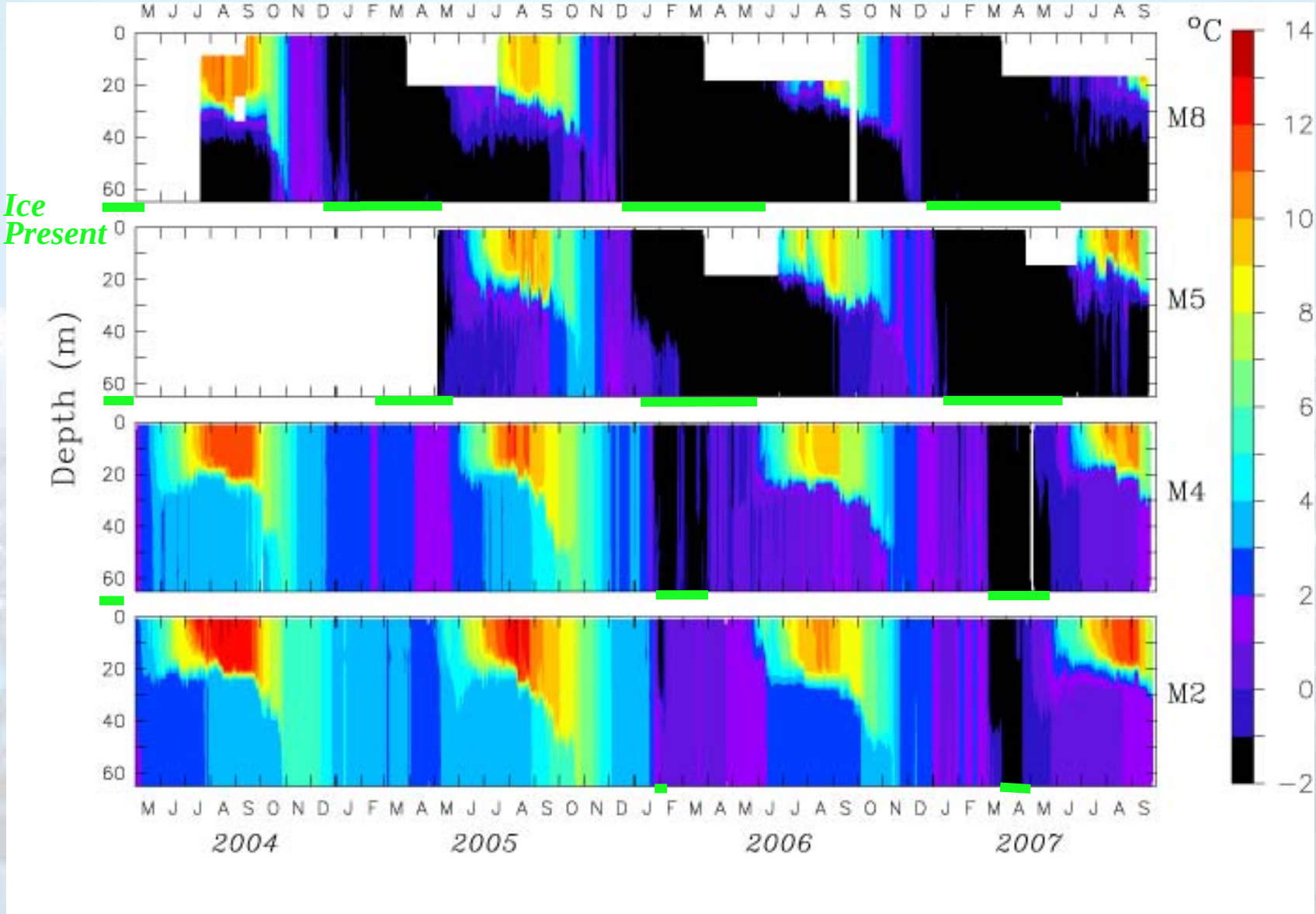


Water Properties along the 70-m Isobath

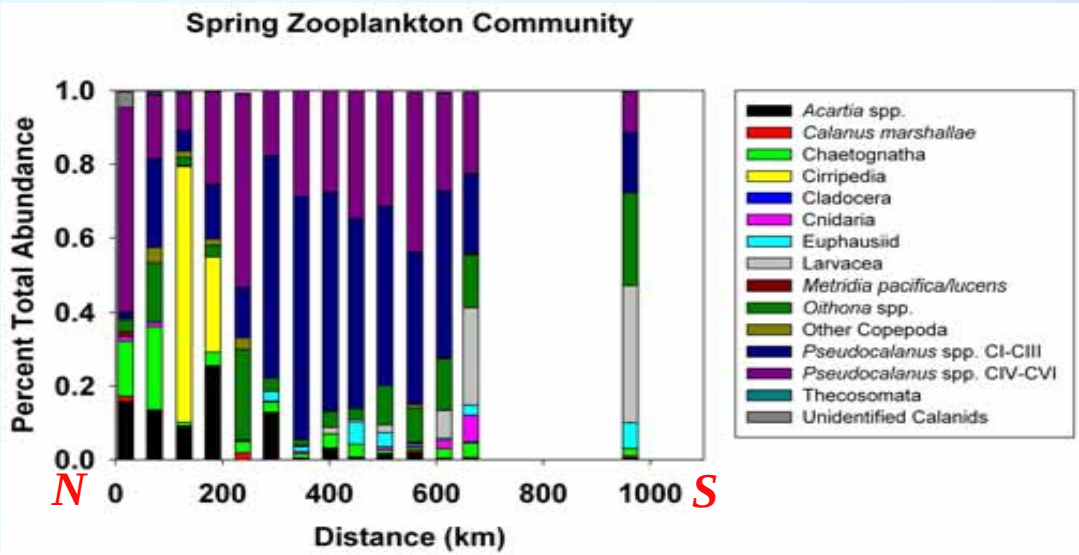
(2005)

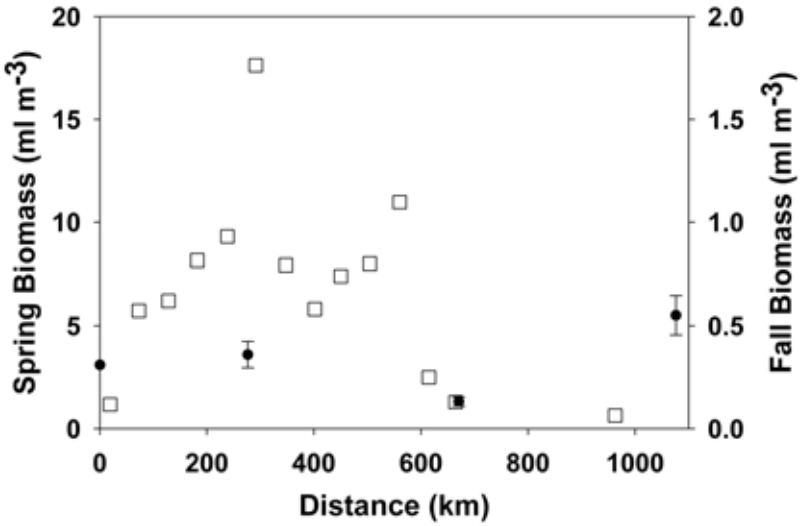


Changes in Temperature at the Moorings



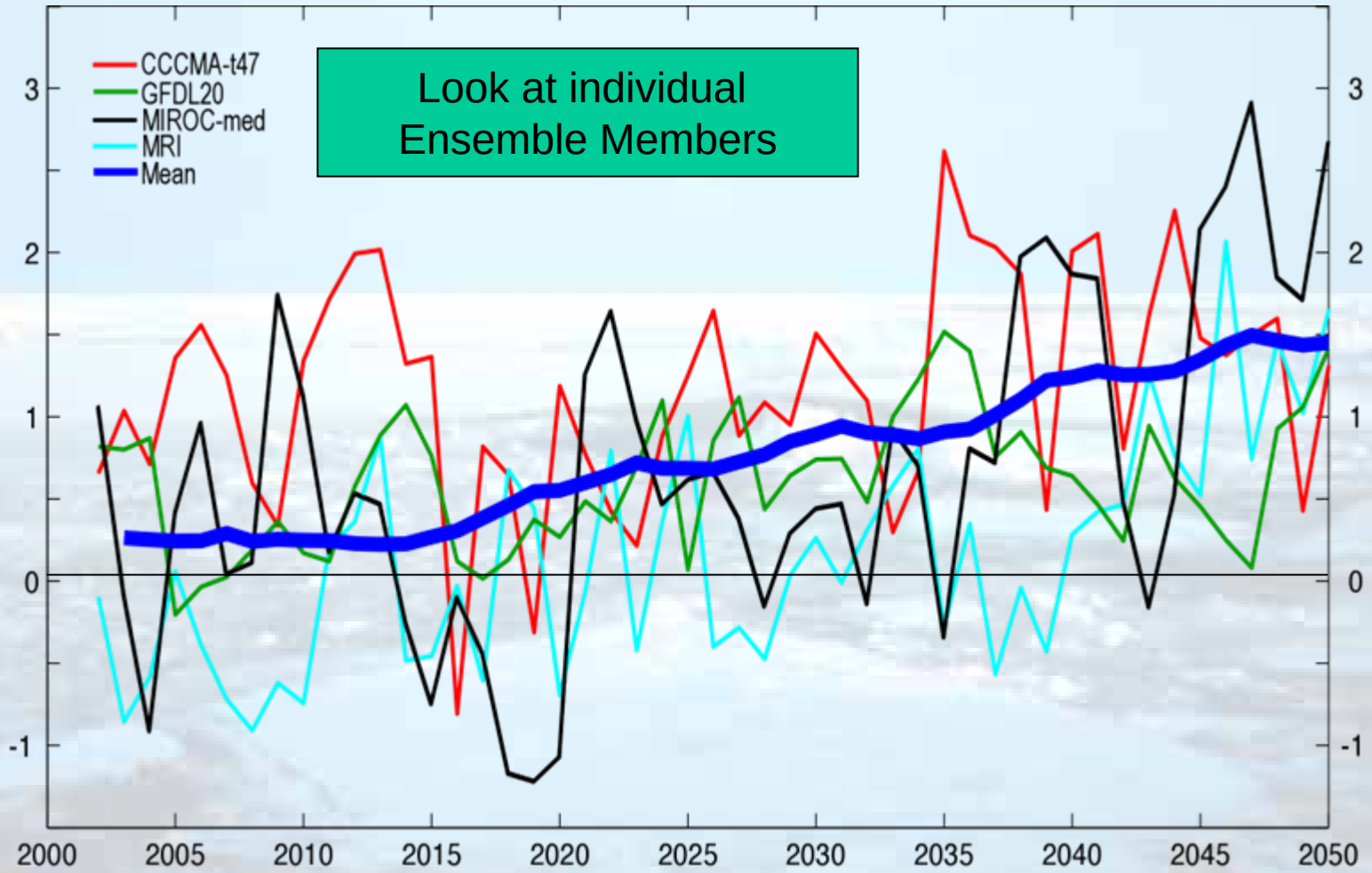
Zooplankton along the 70-m Isobath (2005)





From J. Napp, AFSC

Bering Winter (NDJFM) Ocean Temperature Anomaly (Relative to 1980-99 mean) IPCC A1B emissions scenario



Conclusions

- Definite Arctic/Subarctic ecosystems
- Warm/Cold variability on top of global warming trend
- Arctic sea ice may not return to previous levels (1980s)