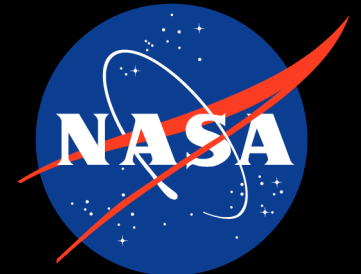


The Arctic sea ice cover of 2016: A year of record low highs and higher-than-expected lows

Dr. Alek Petty code 615 (Cryospheric Sciences Lab)

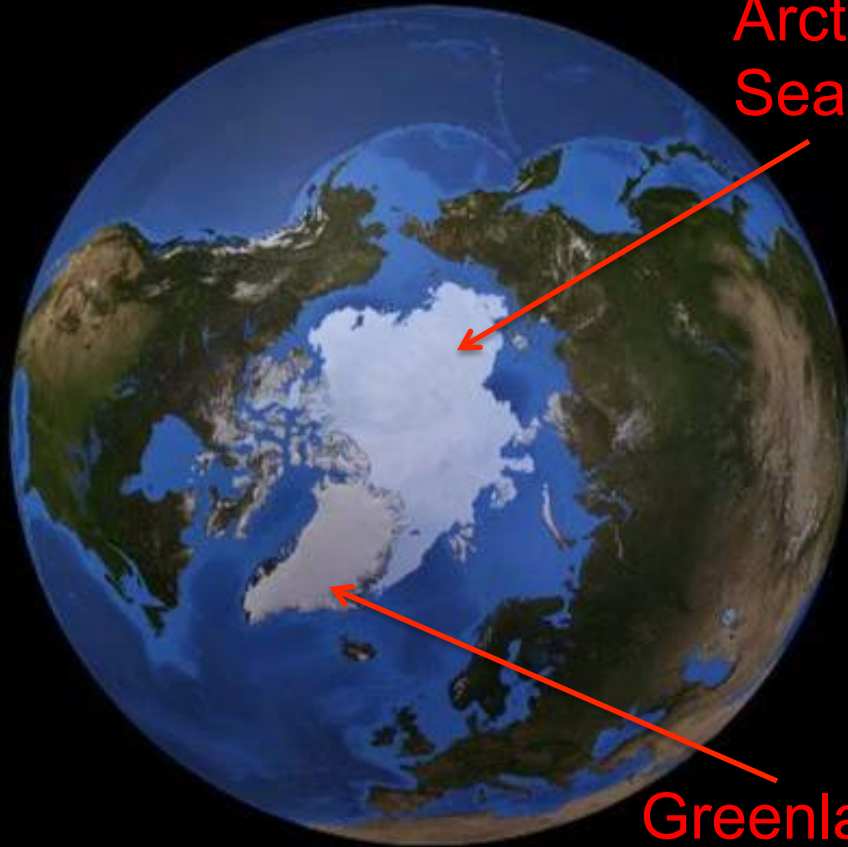


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ARCTIC



Arctic
Sea Ice

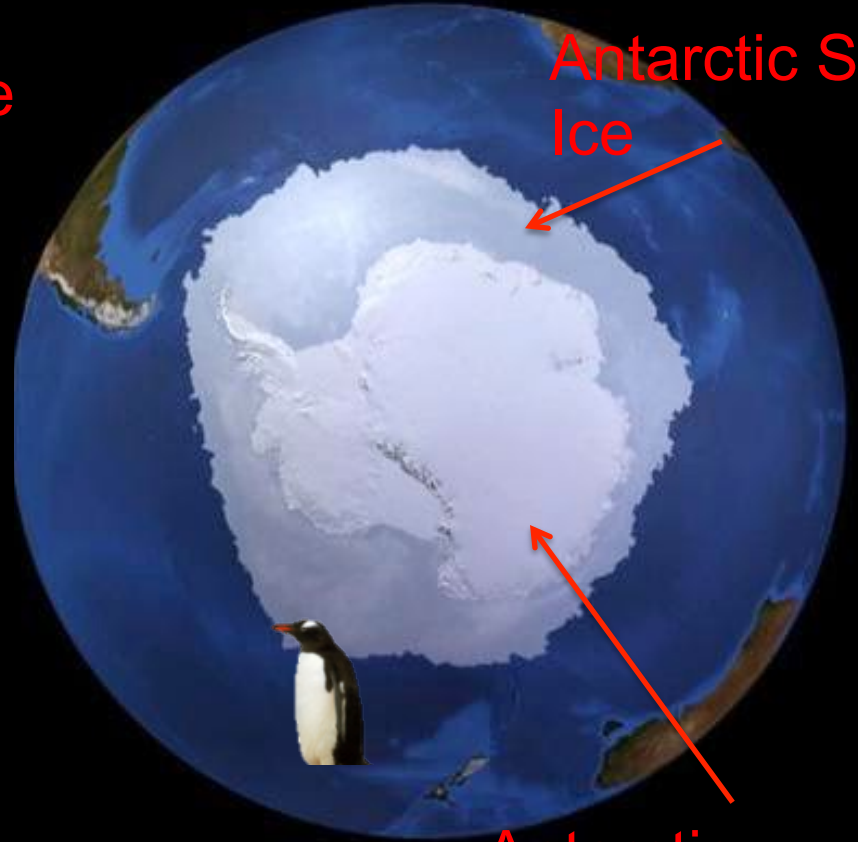


Greenland
Ice Sheet

ANTARCTIC

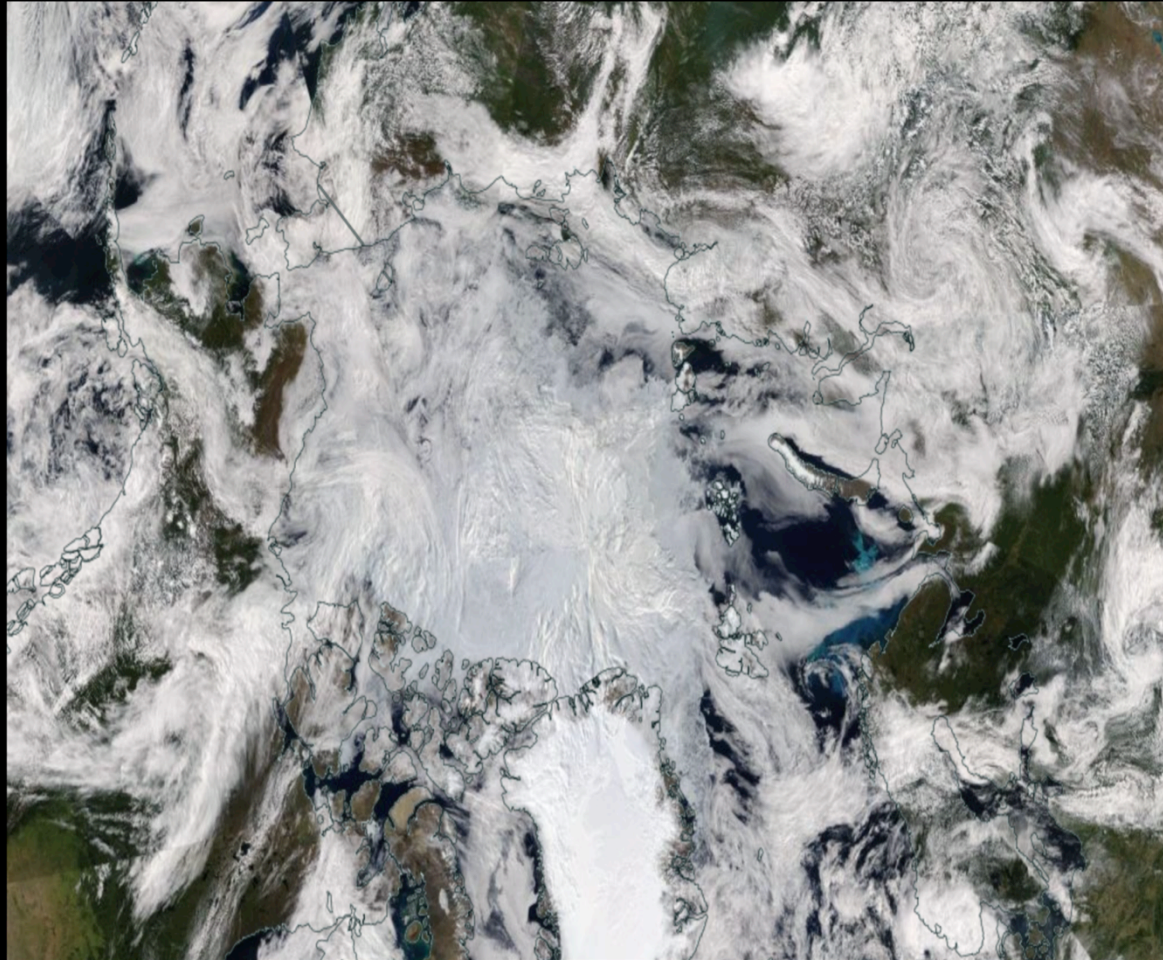


Antarctic Sea
Ice

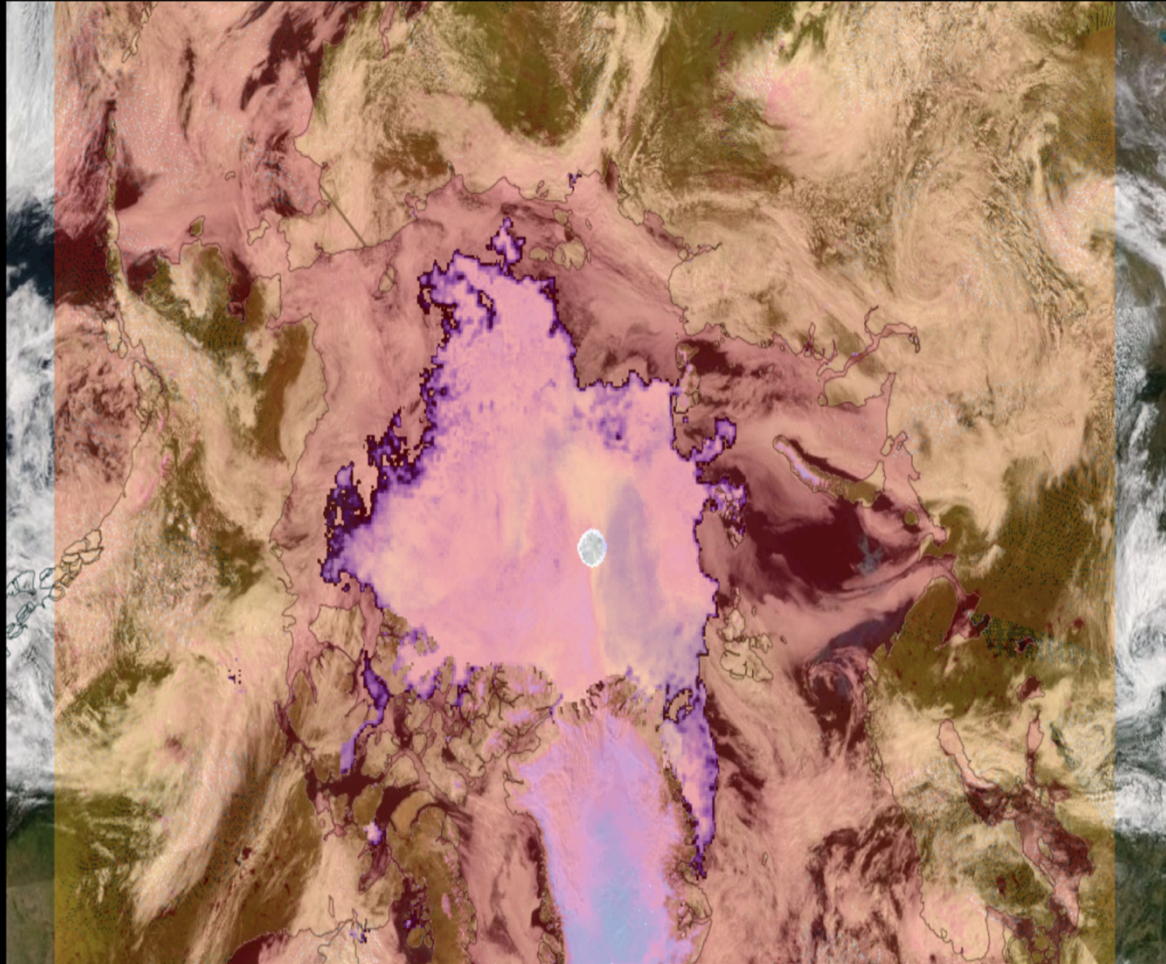


Antarctic
Ice Sheet

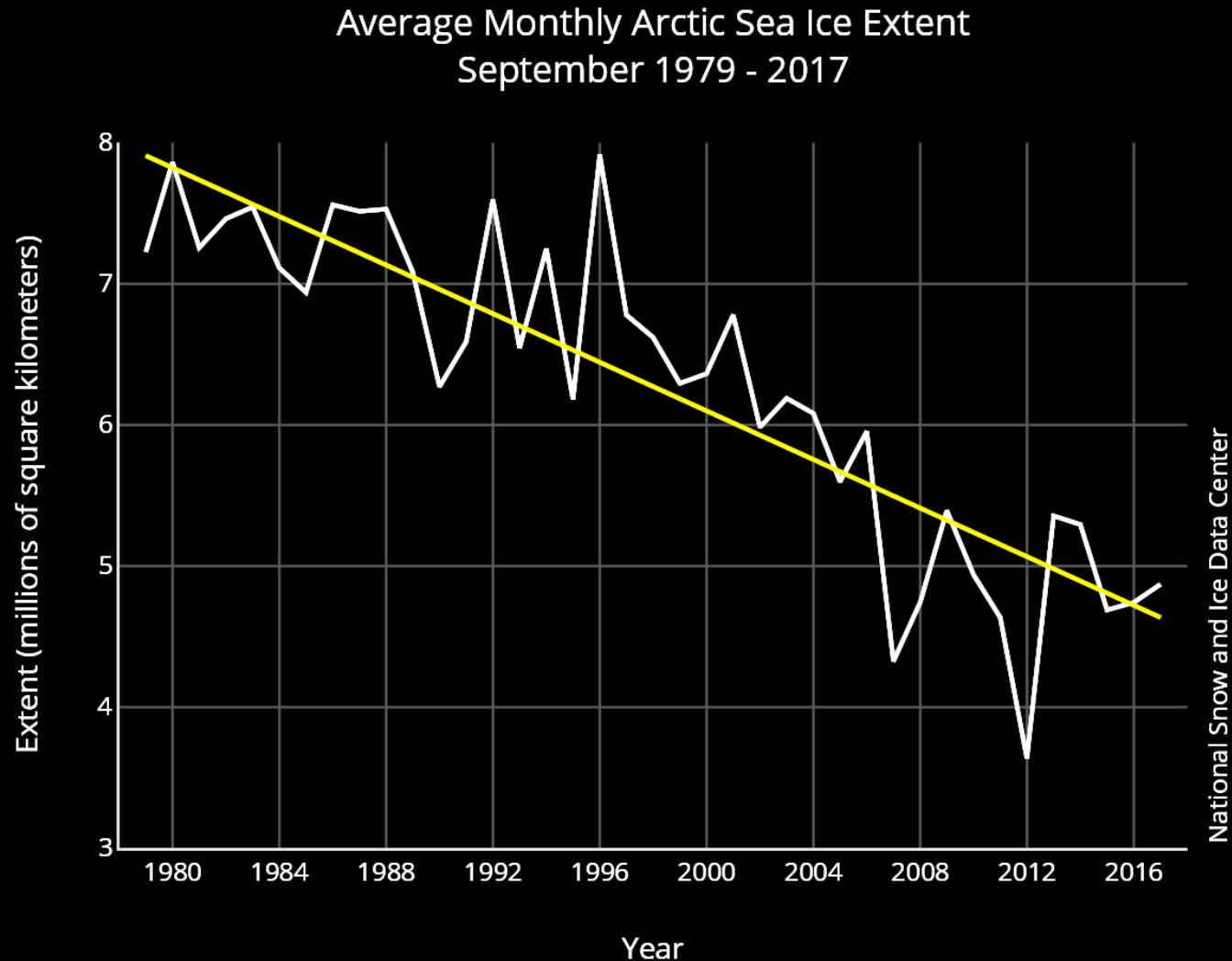
Passive microwave sensing of sea ice



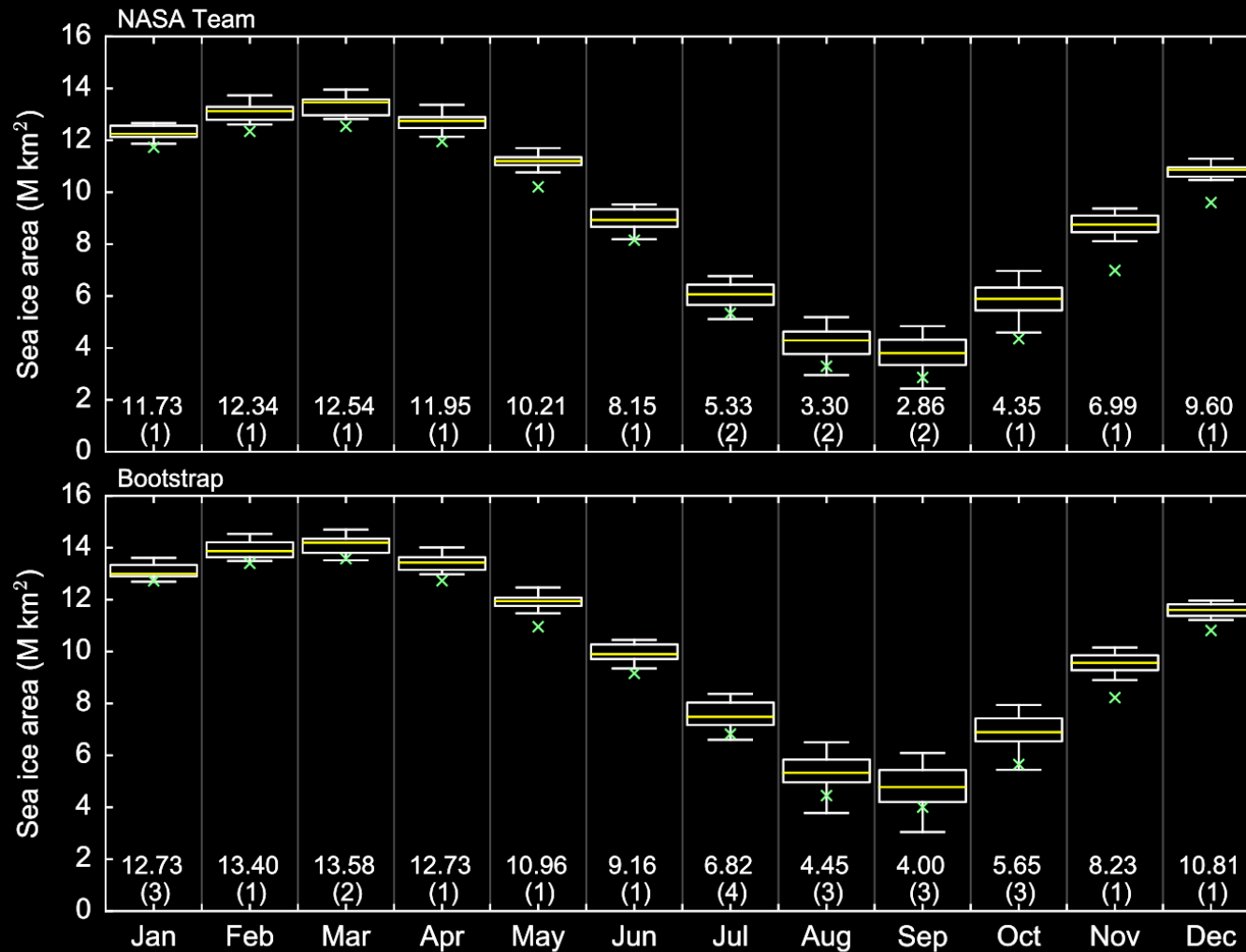
Passive microwave sensing of sea ice



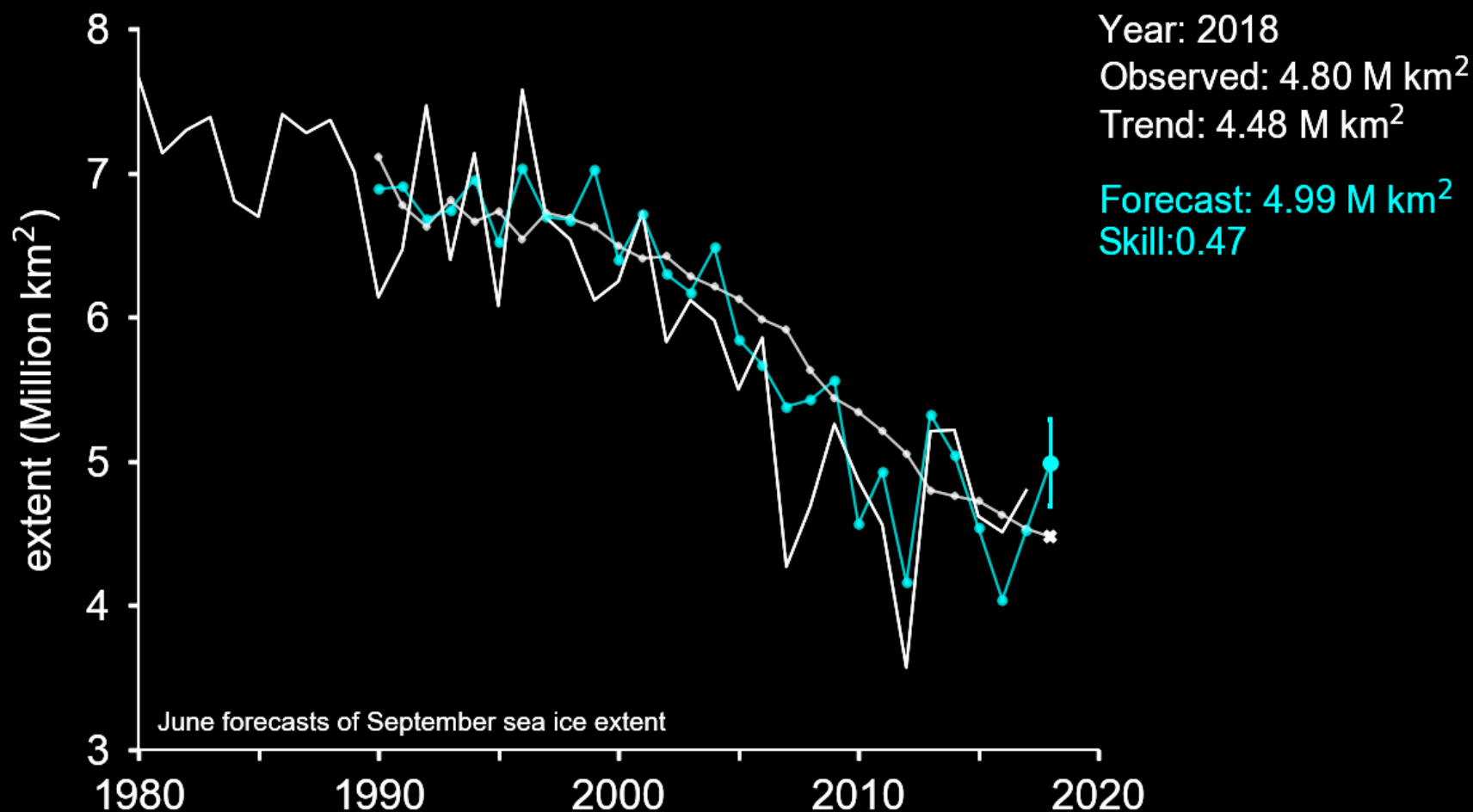
Arctic *summer* sea ice cover in decline



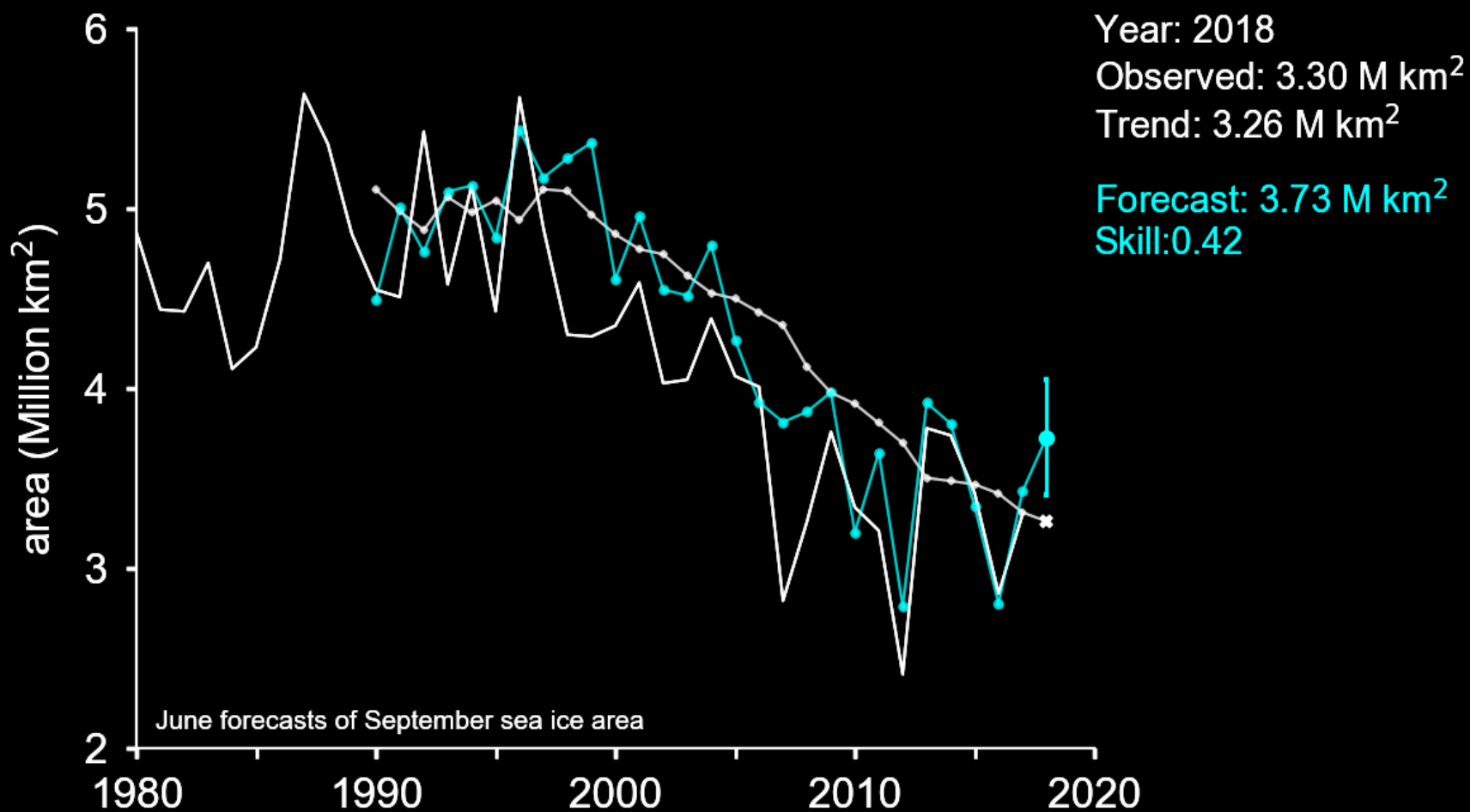
2016 saw record low sea ice area in seasons *other* than summer



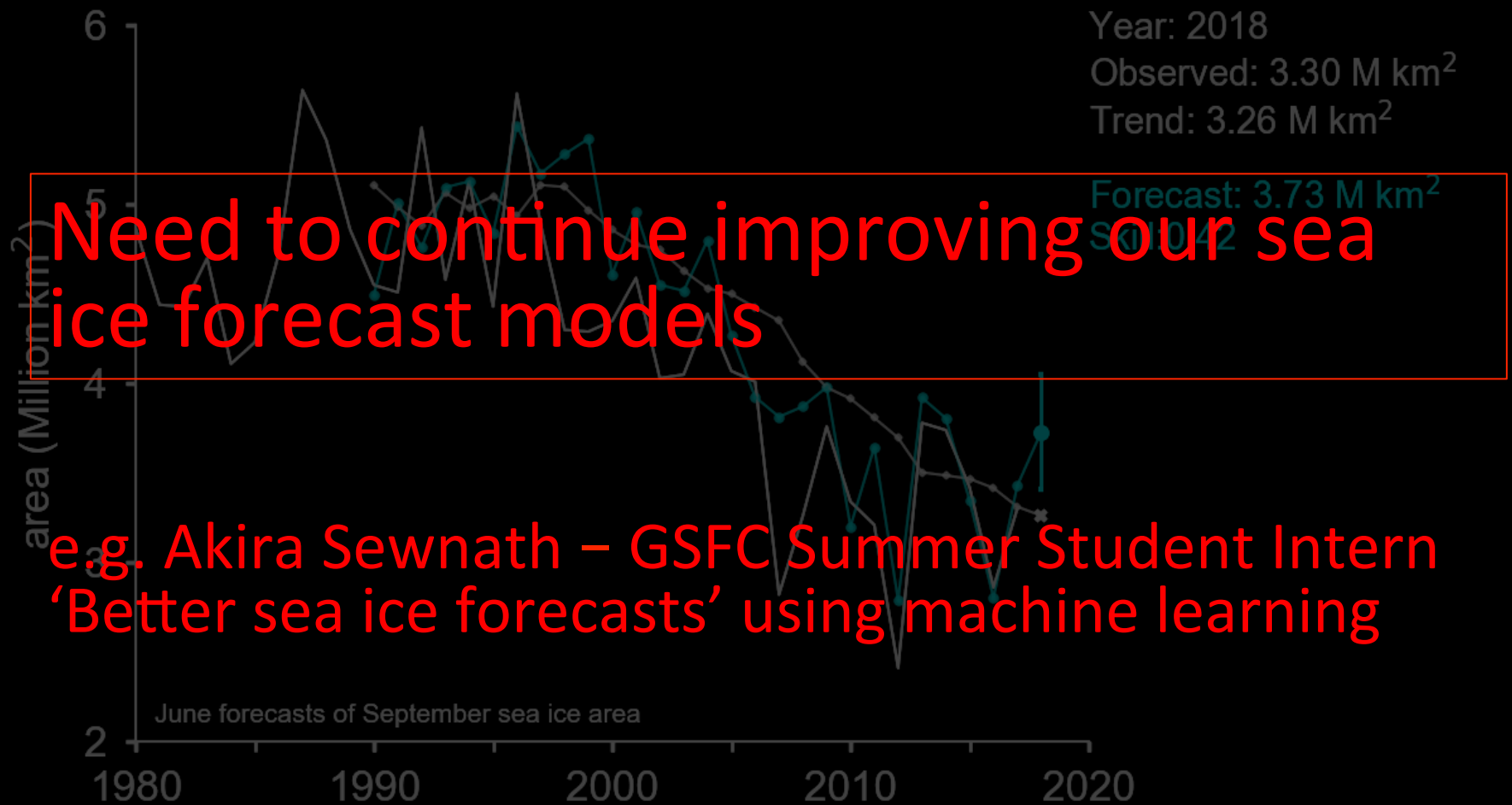
Challenges for seasonal forecasts



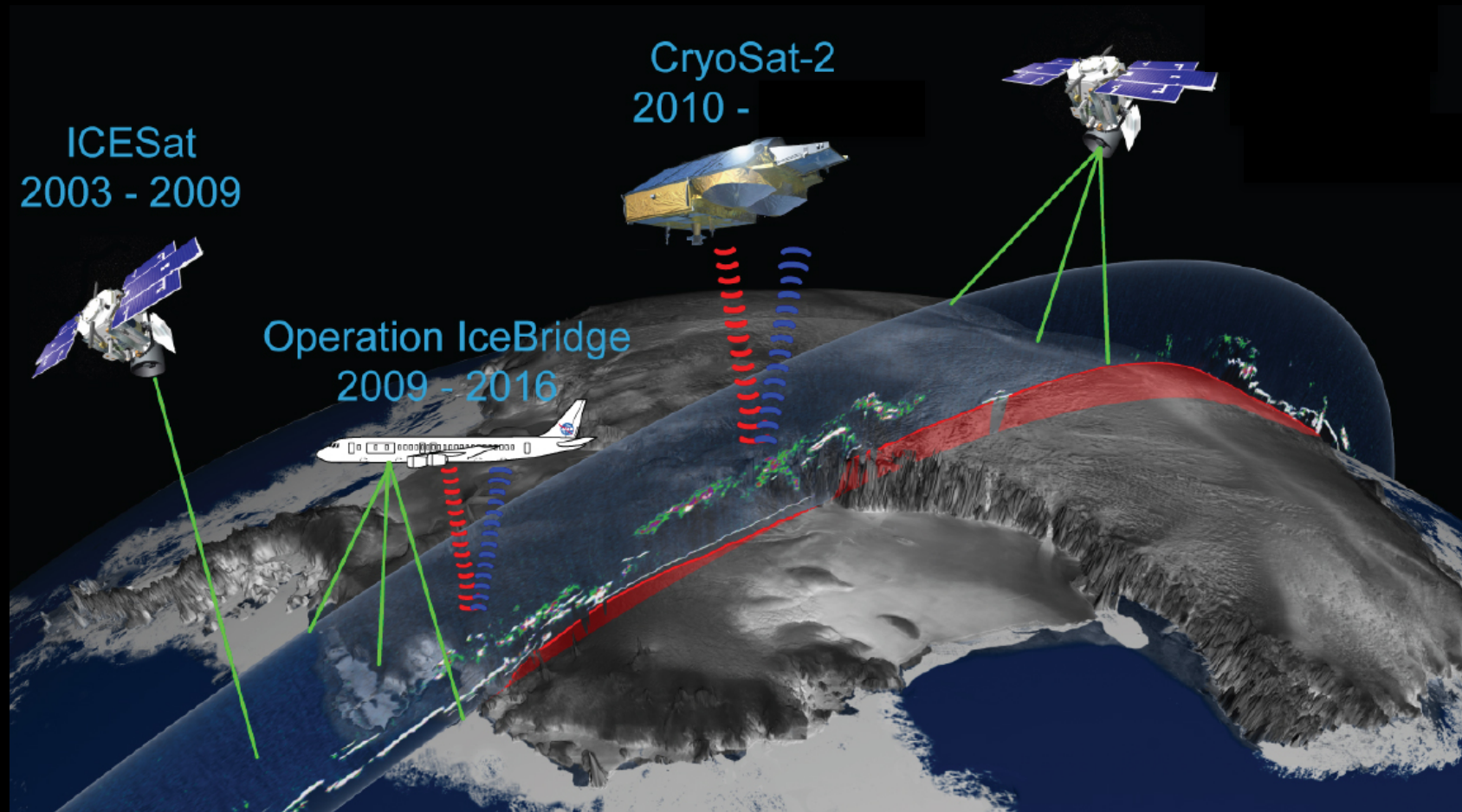
Challenges for seasonal forecasts



Challenges for seasonal forecasts

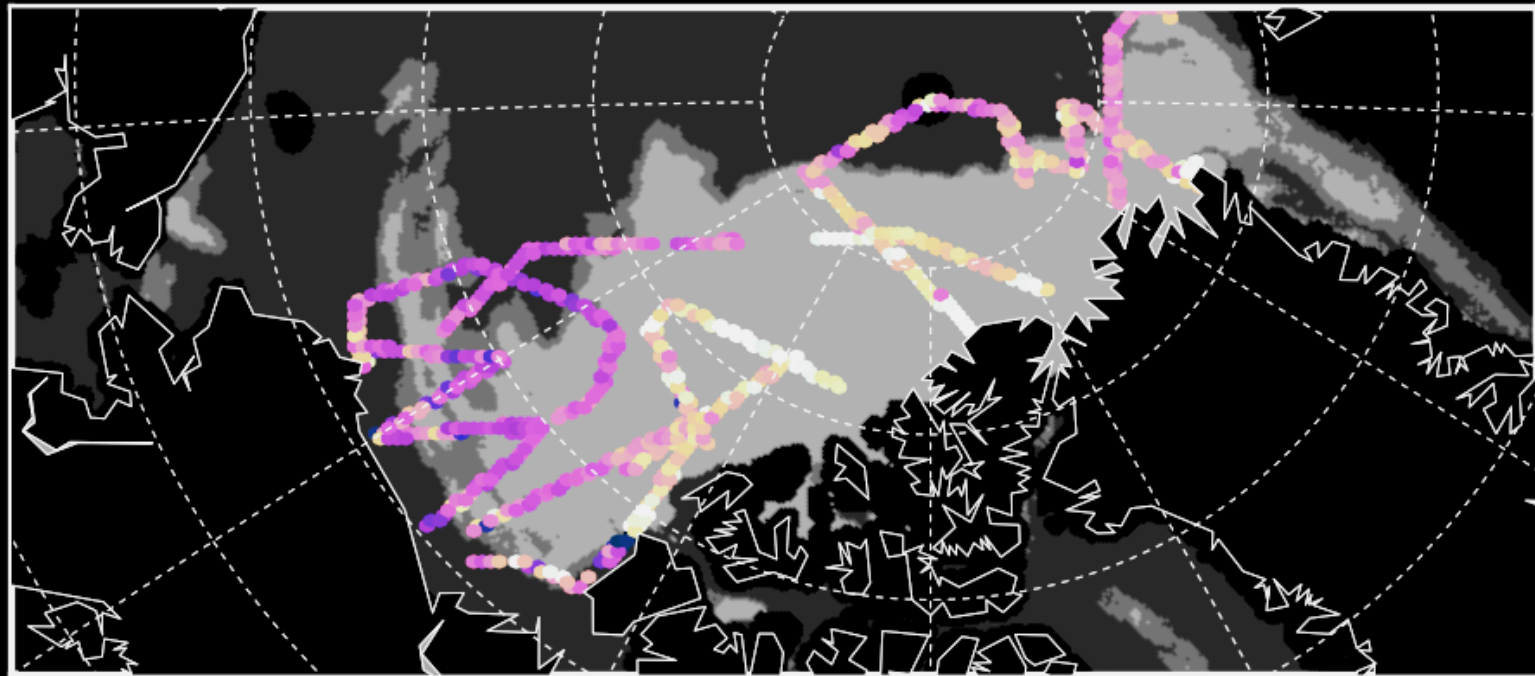


New crop of active satellites provide the crucial third dimension



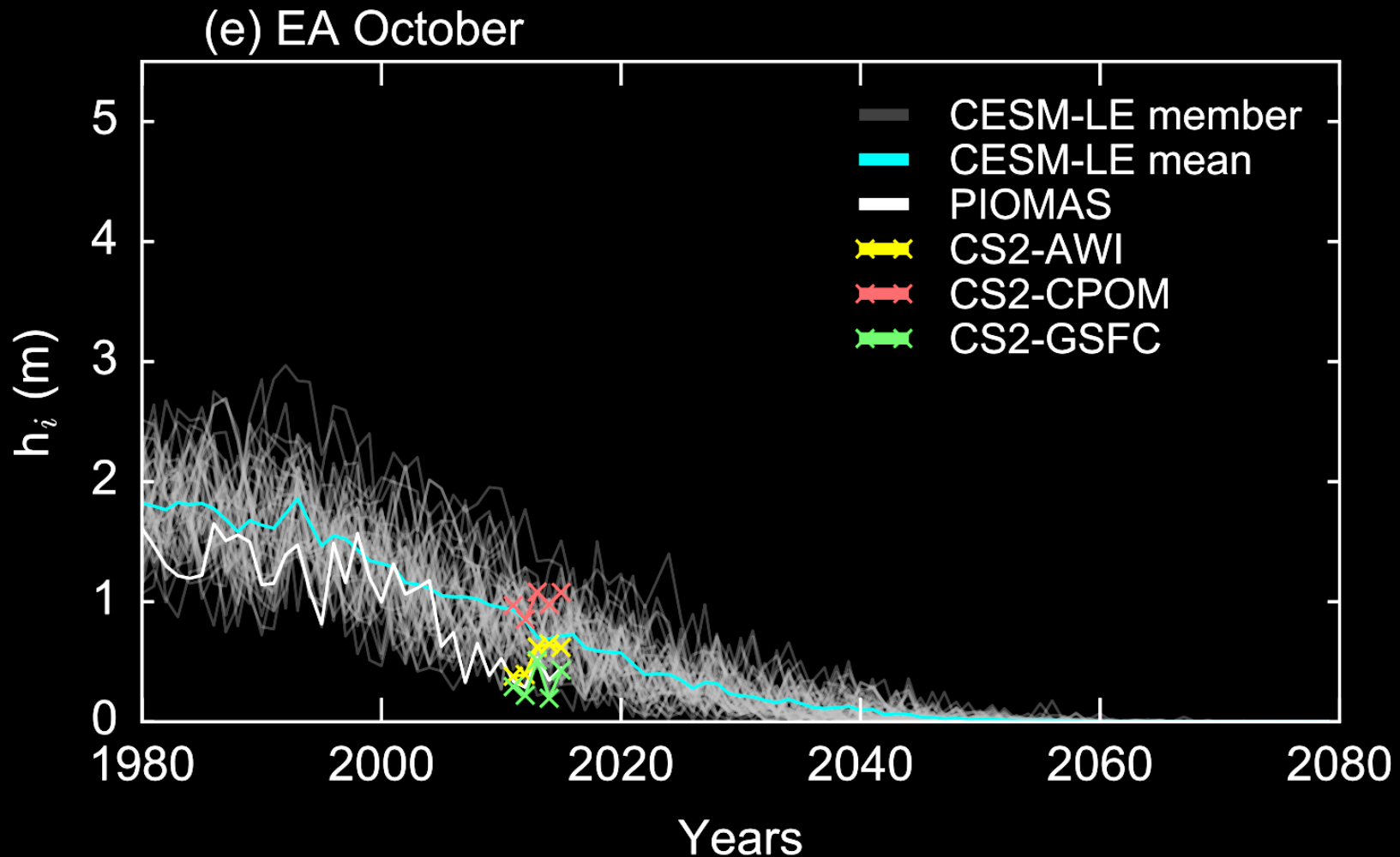
NASA's Operation IceBridge

Sea ice thickness results

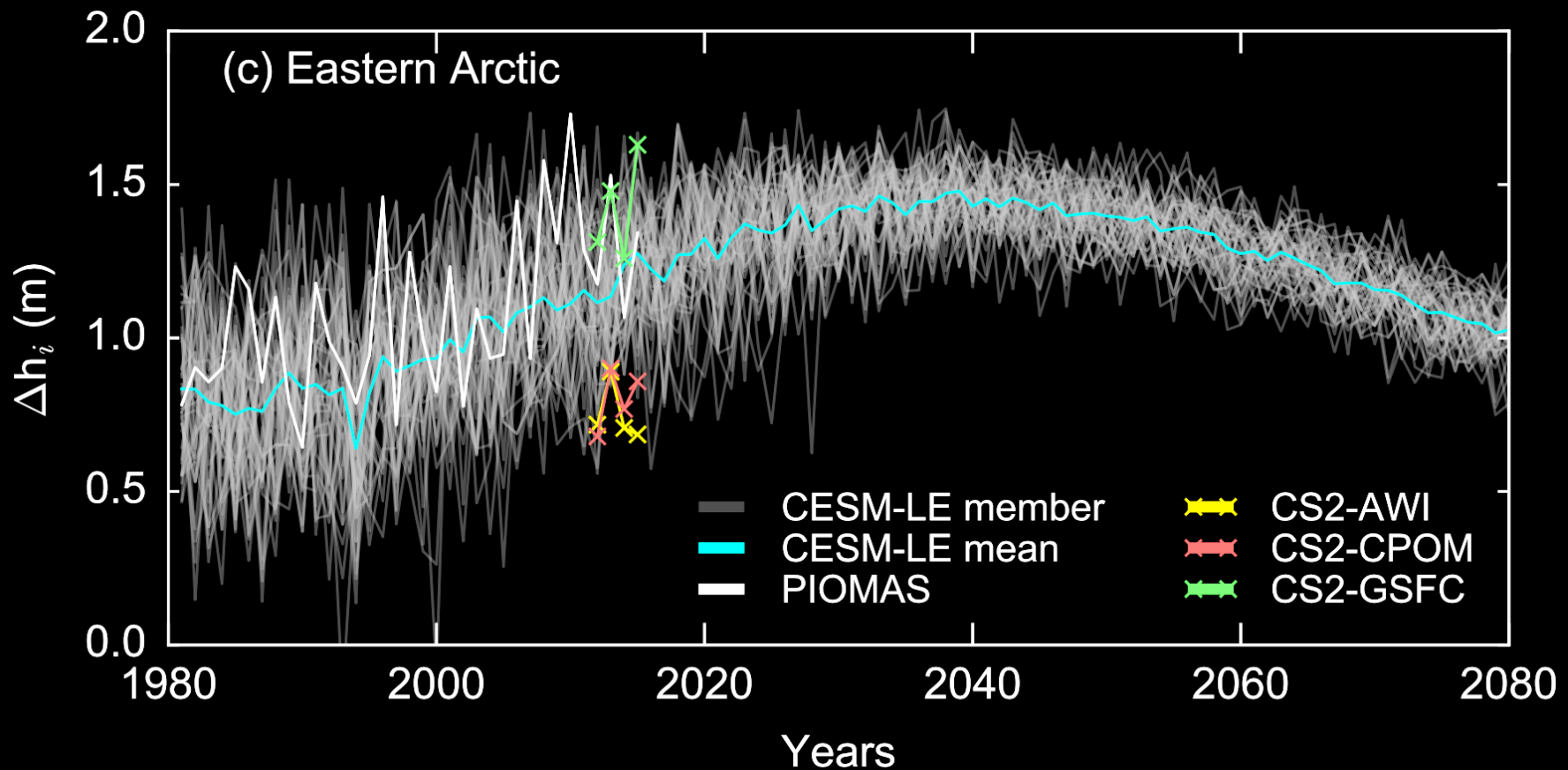


Spring 2015 data

Models and observations provide the long-term context.



Winter ice growth projected to increase, before decreasing towards the end of the century



Questions?

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