

Climate Change The IPCC Assessment



One Report

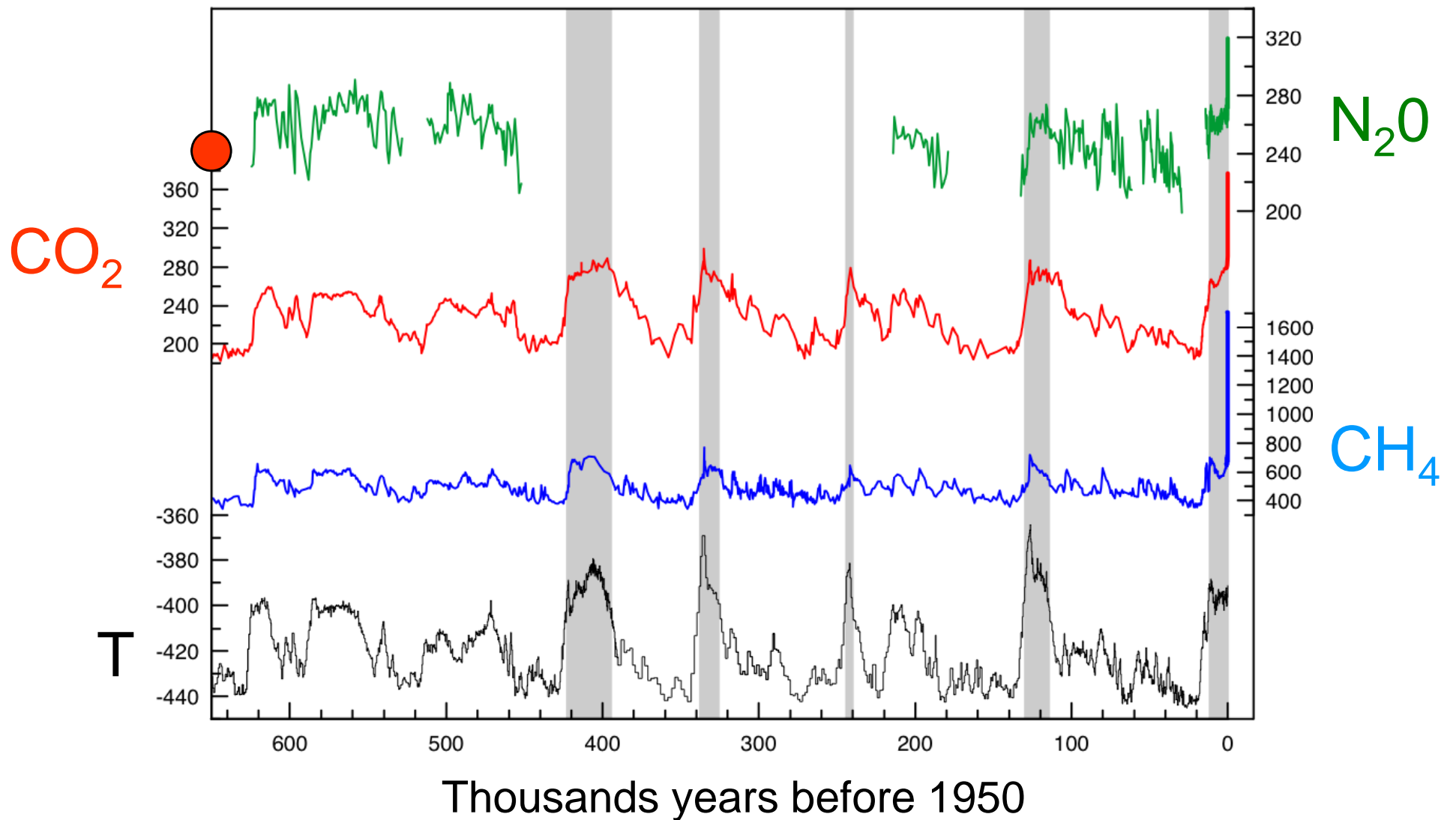


- **The Physical Science Basis**
Release: 2 February 2007
- **Impacts, Adaptation and Vulnerability**
Release: 6 April 2007
- **Mitigation of Climate Change**
Release: 4 May 2007
- **The Synthesis Report**
Release: 17 November 2007

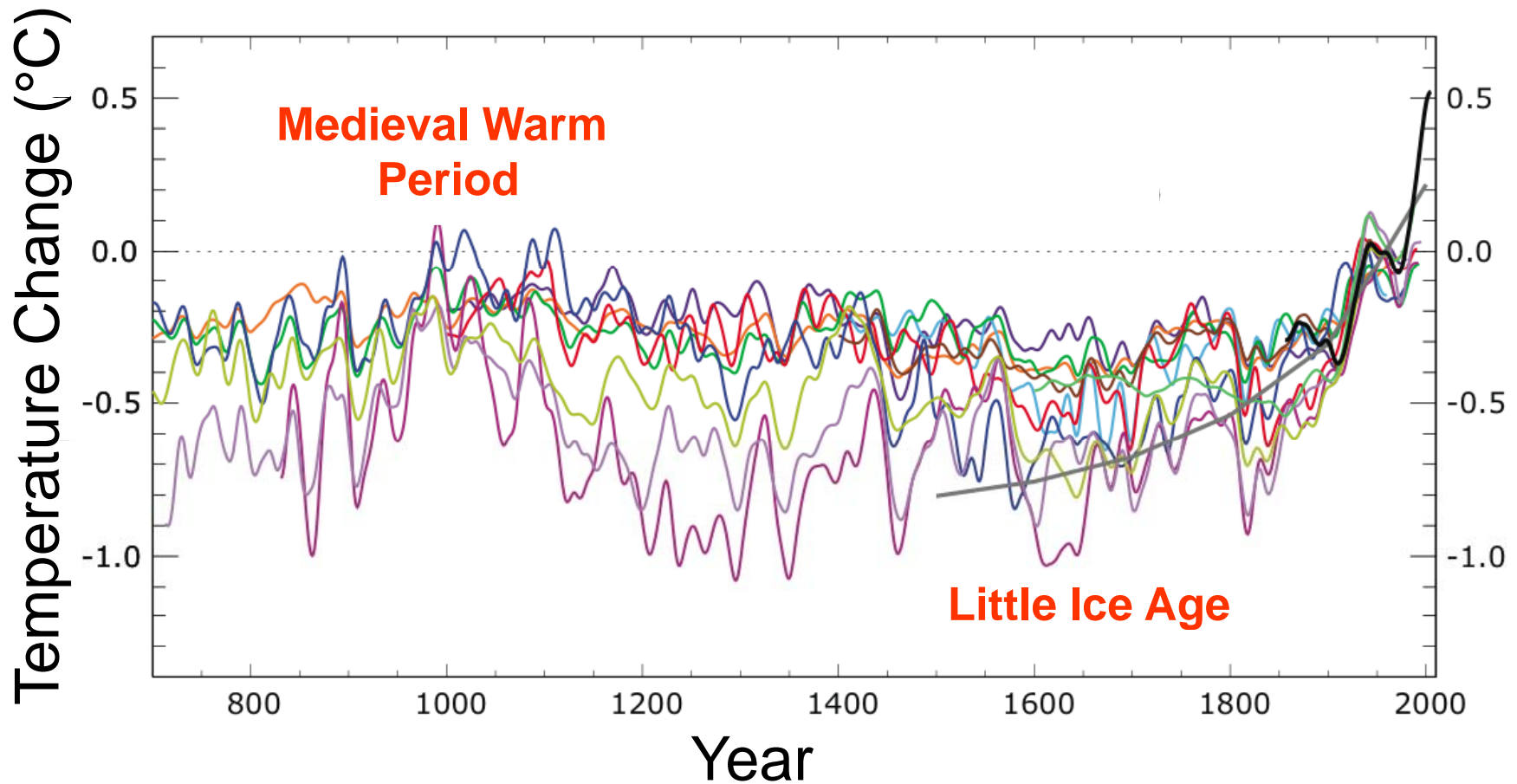
Key Messages

- The climate has warmed, will continue to warm, and humans are the cause
- Mitigation will not substantially affect the climate over the next few decades
- But, choices made now will have a big impact on the late 21st century climate

From 650,000 Years Ago

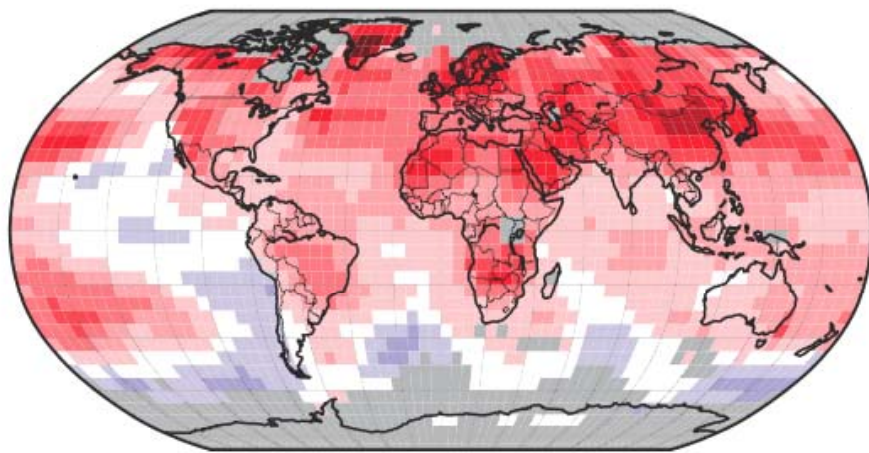


Temperature From 1,300 Years Ago

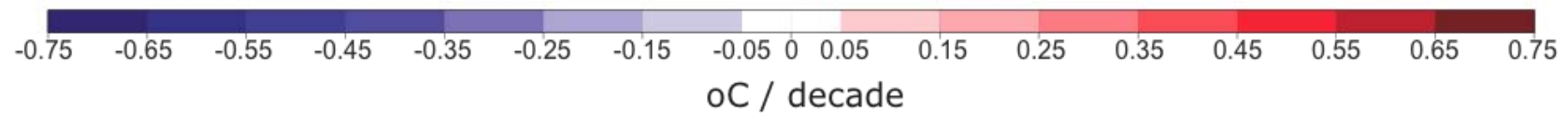
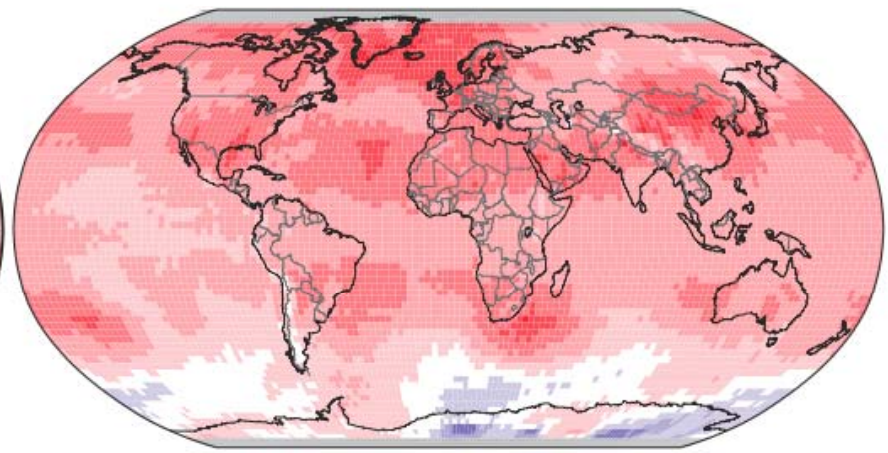


Where is This Warming Happening?

Surface



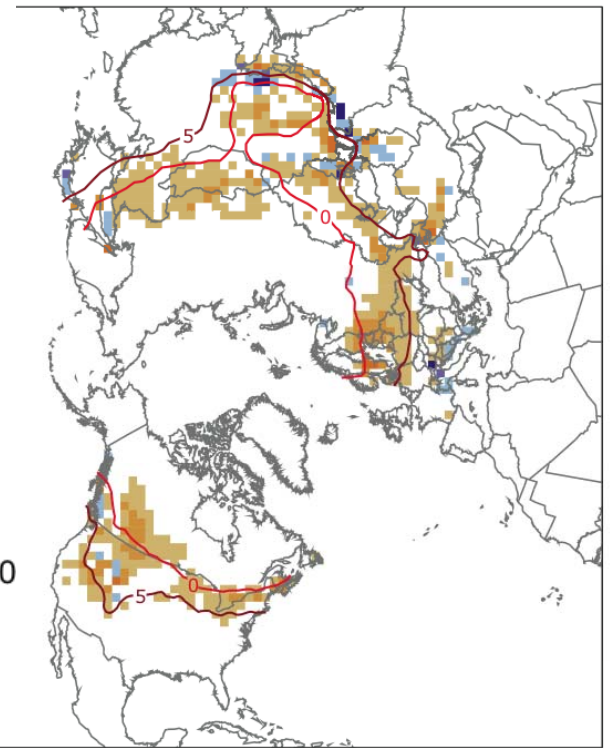
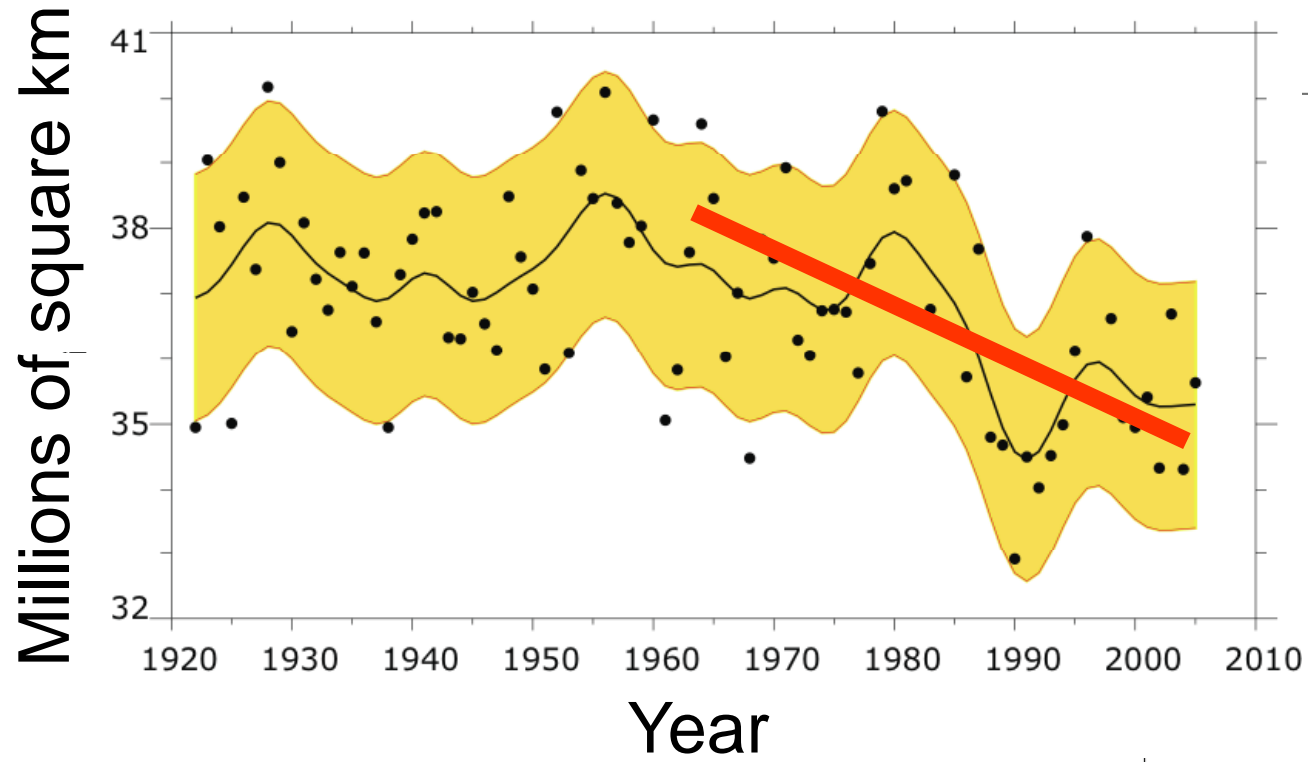
Troposphere



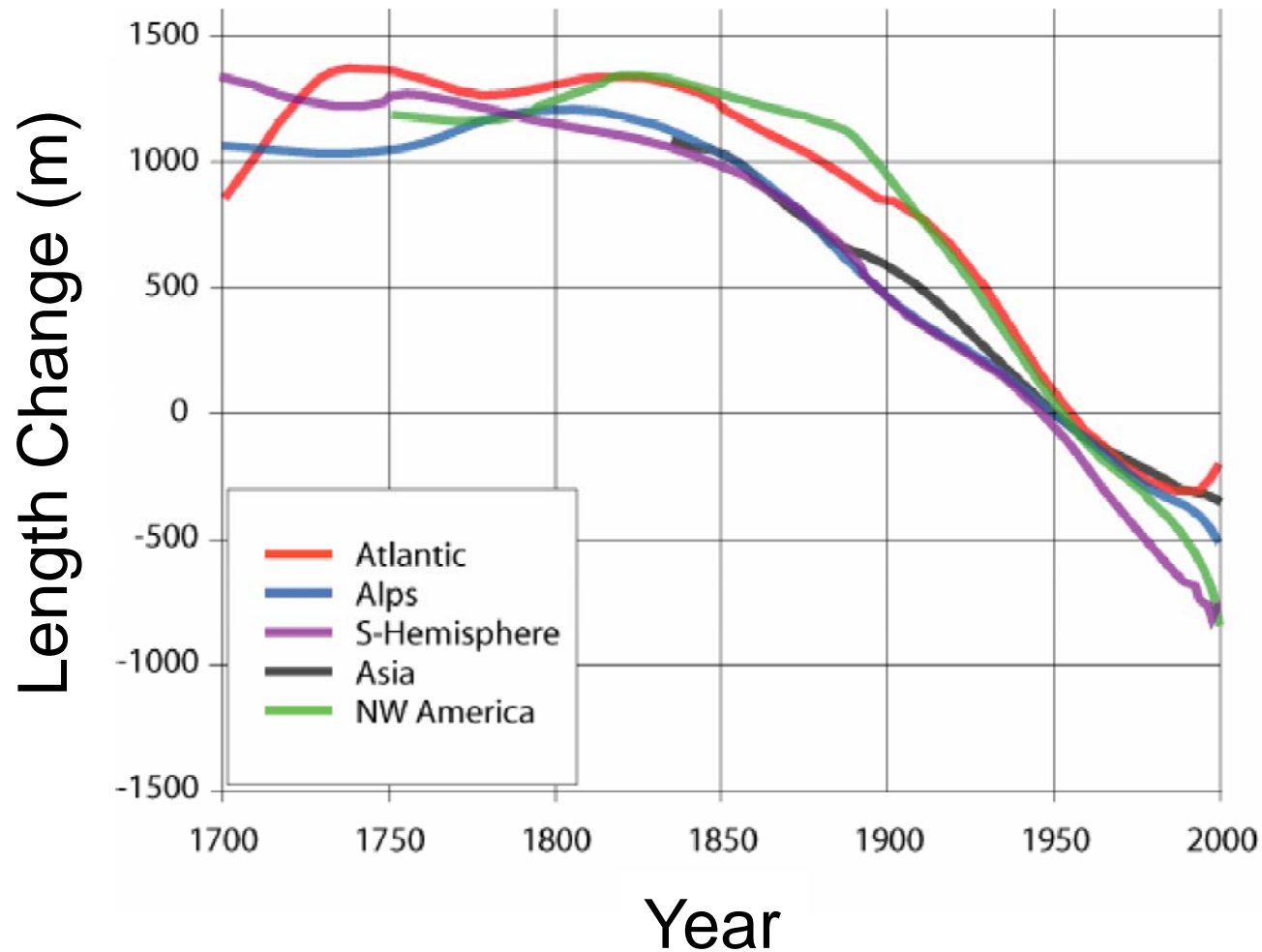
Cryospheric Changes

- Snow is melting
- Glaciers are retreating
- Sea-ice is vanishing
- Frozen ground is thawing
- Ice-sheets are shrinking

Snow is Melting



Glaciers are Retreating



Toboggan Glacier, Alaska



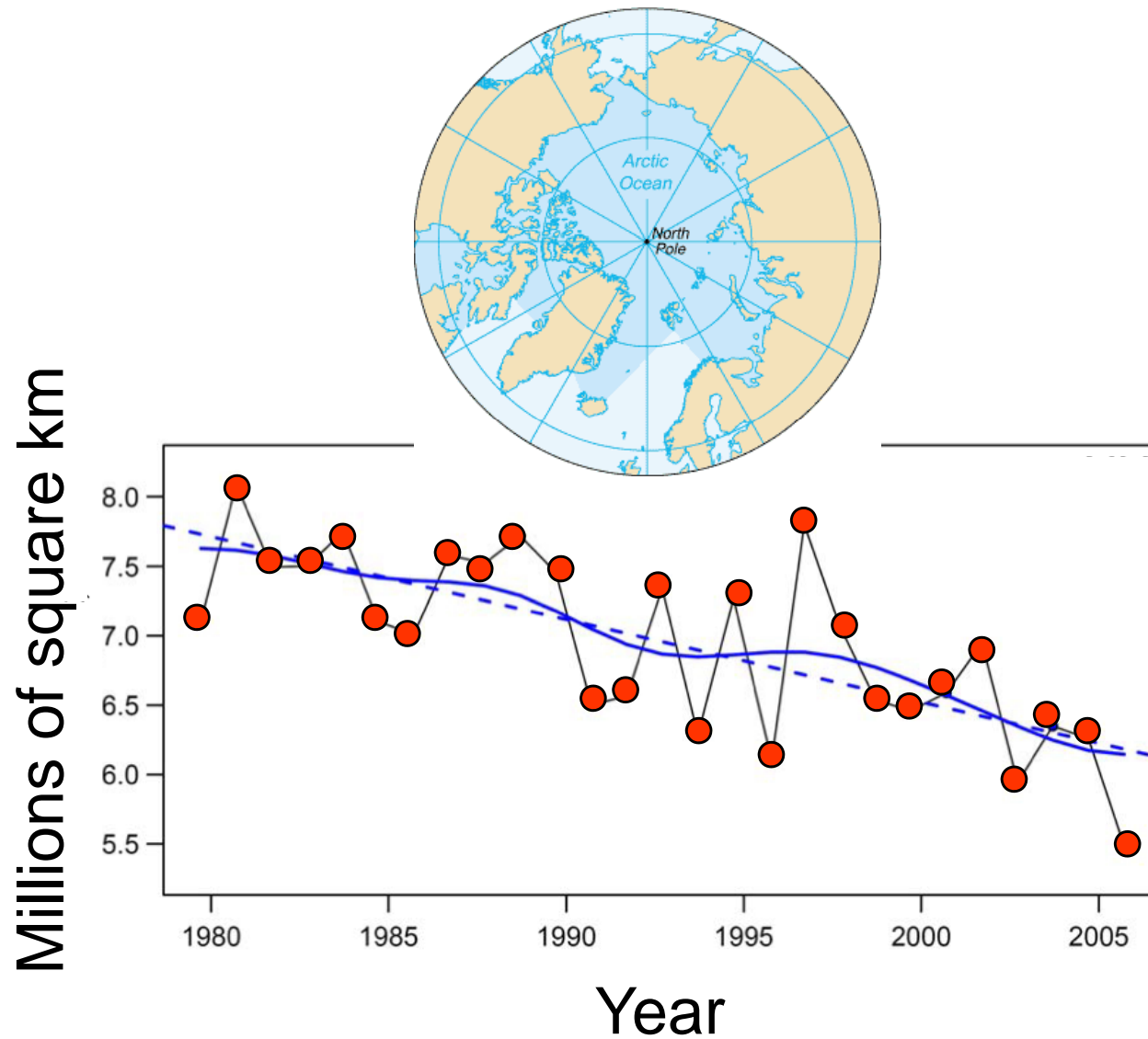
1909



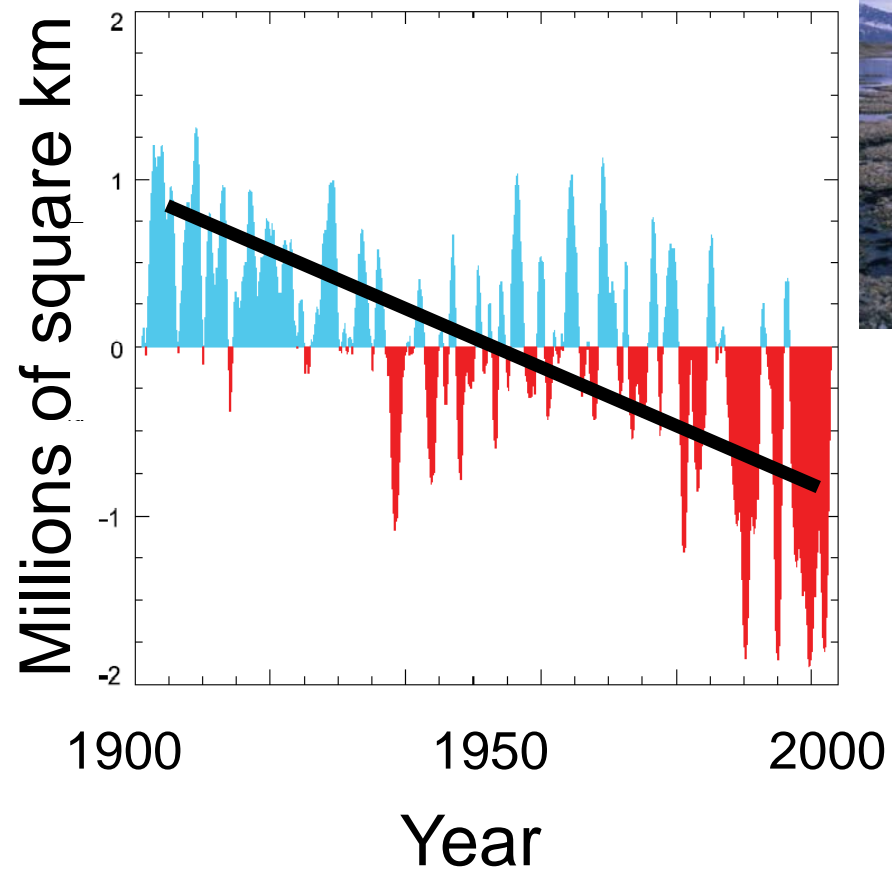
2000

Photos: US Geological Service,
via National Snow and Ice Data
Centre

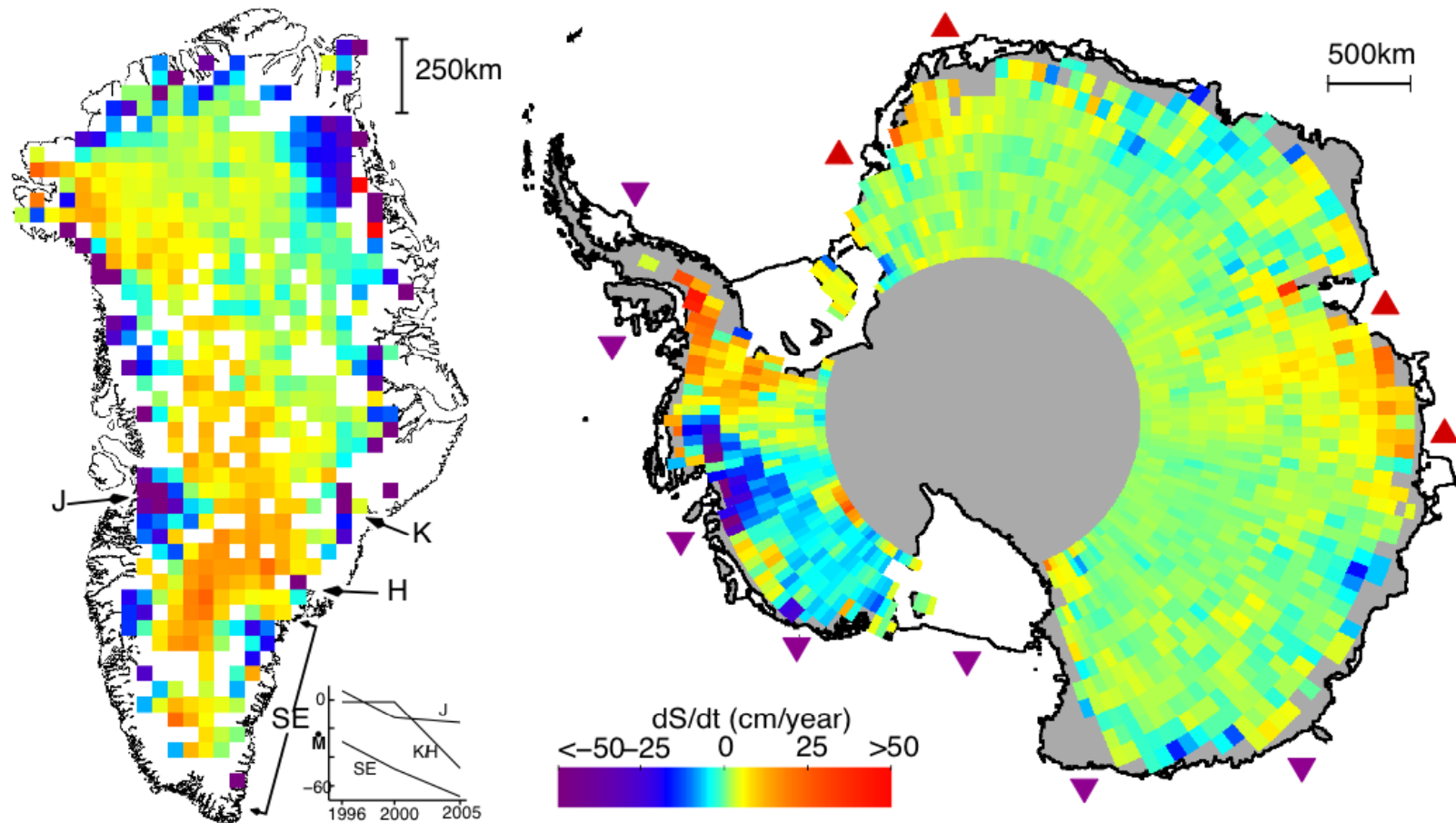
Sea-Ice is Vanishing



Frozen Ground is Thawing



Ice-Sheets are Shrinking

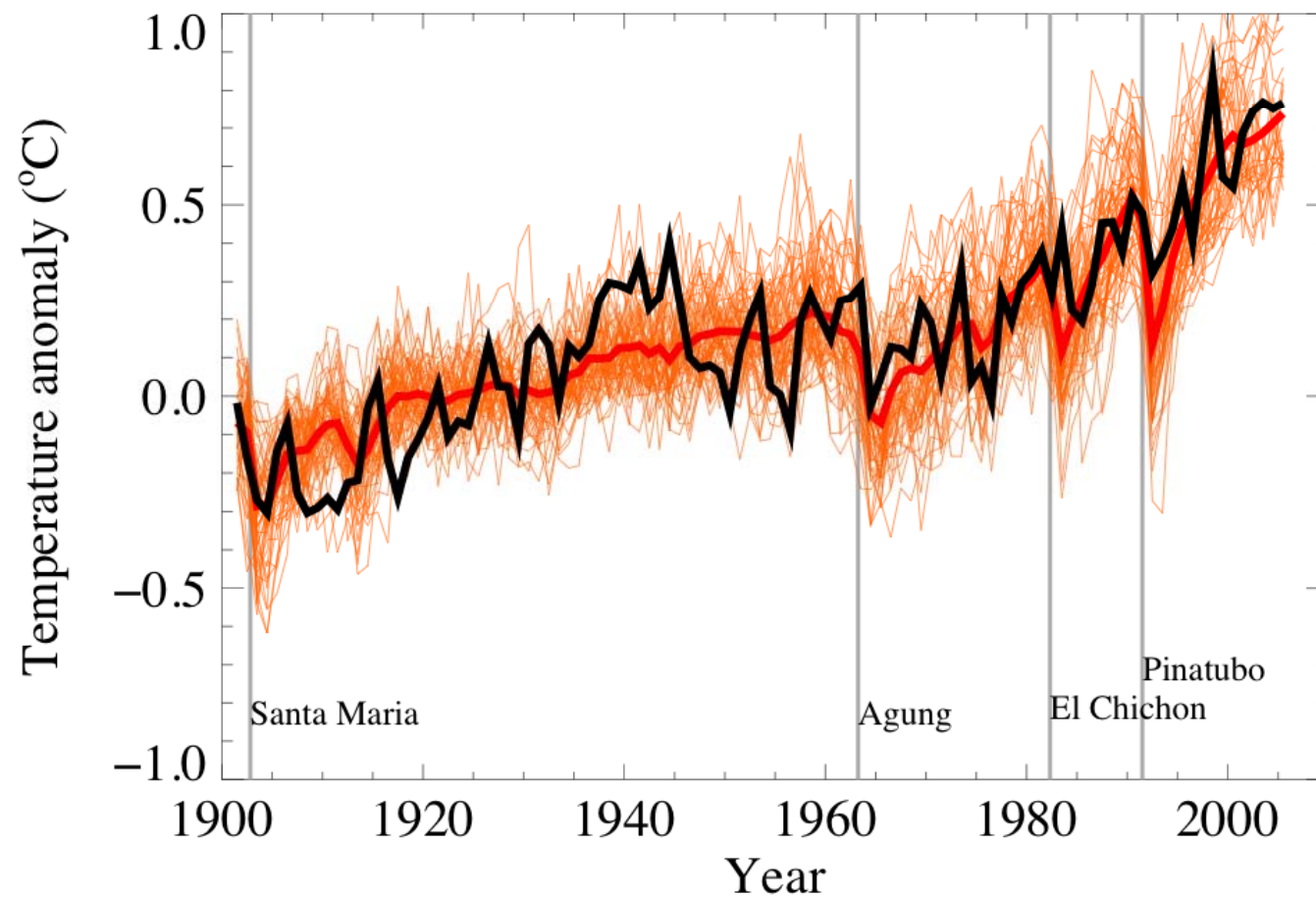


Elevation Change (cm/year)

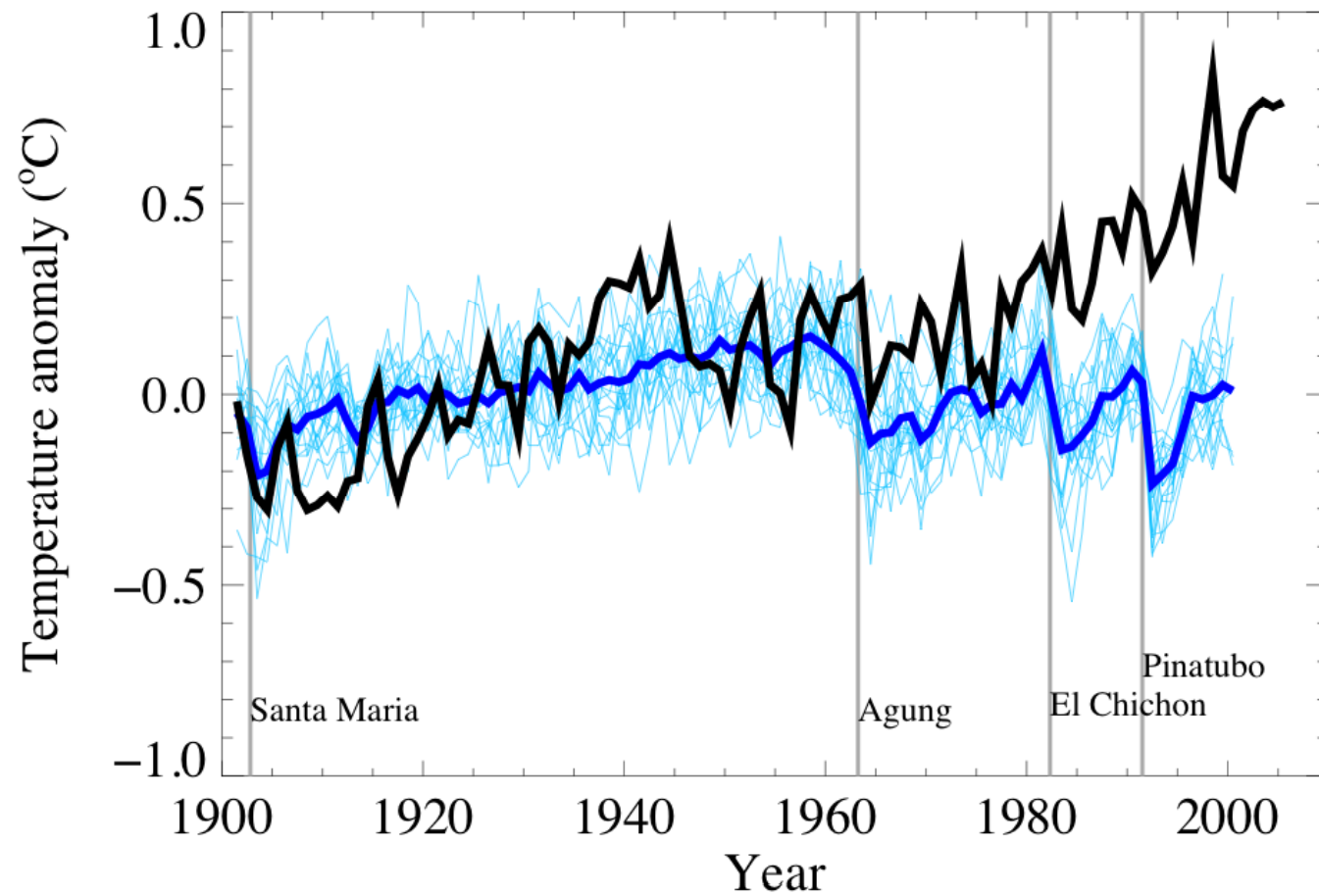
Why is This Happening?



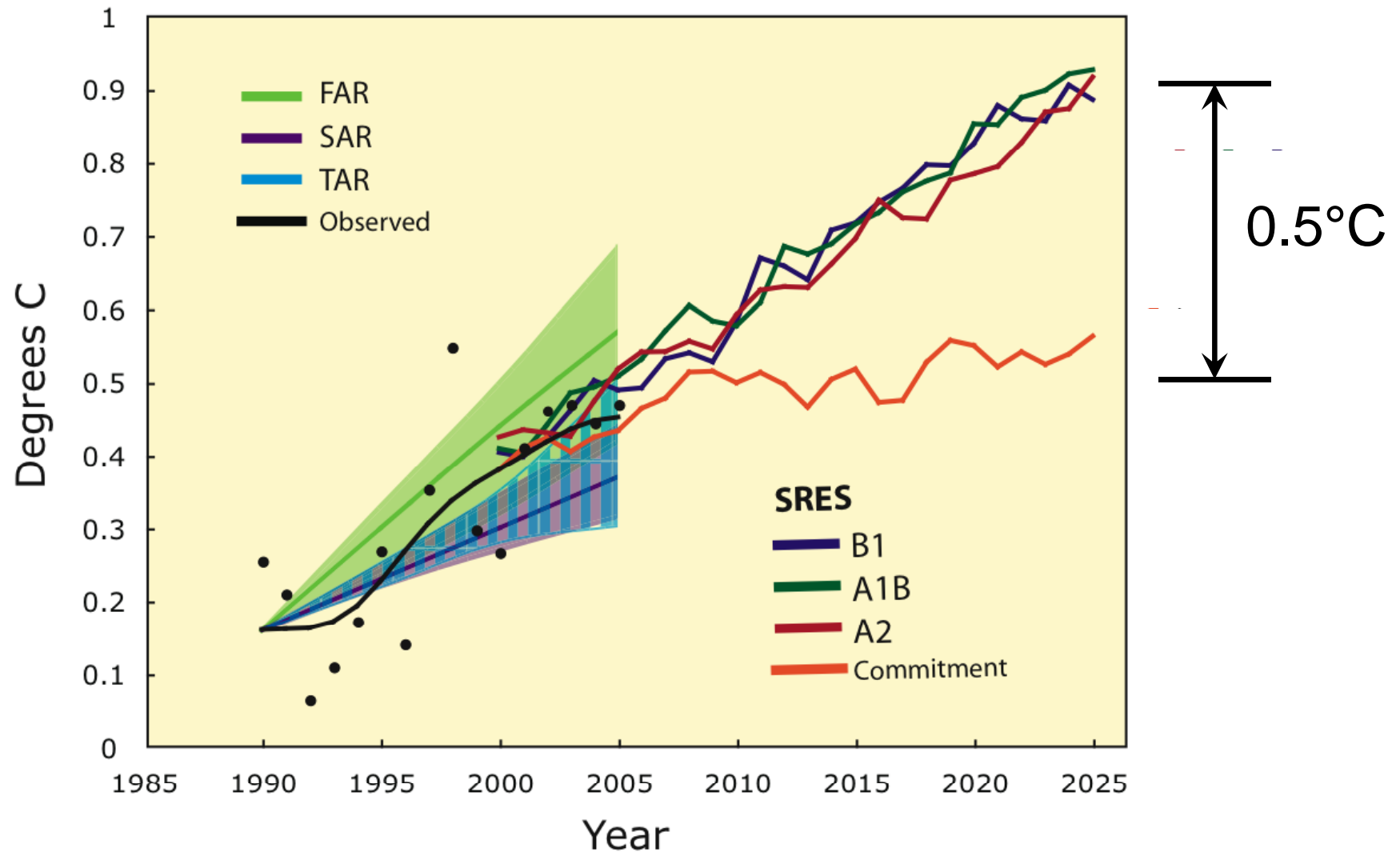
— Observations
— Climate Models



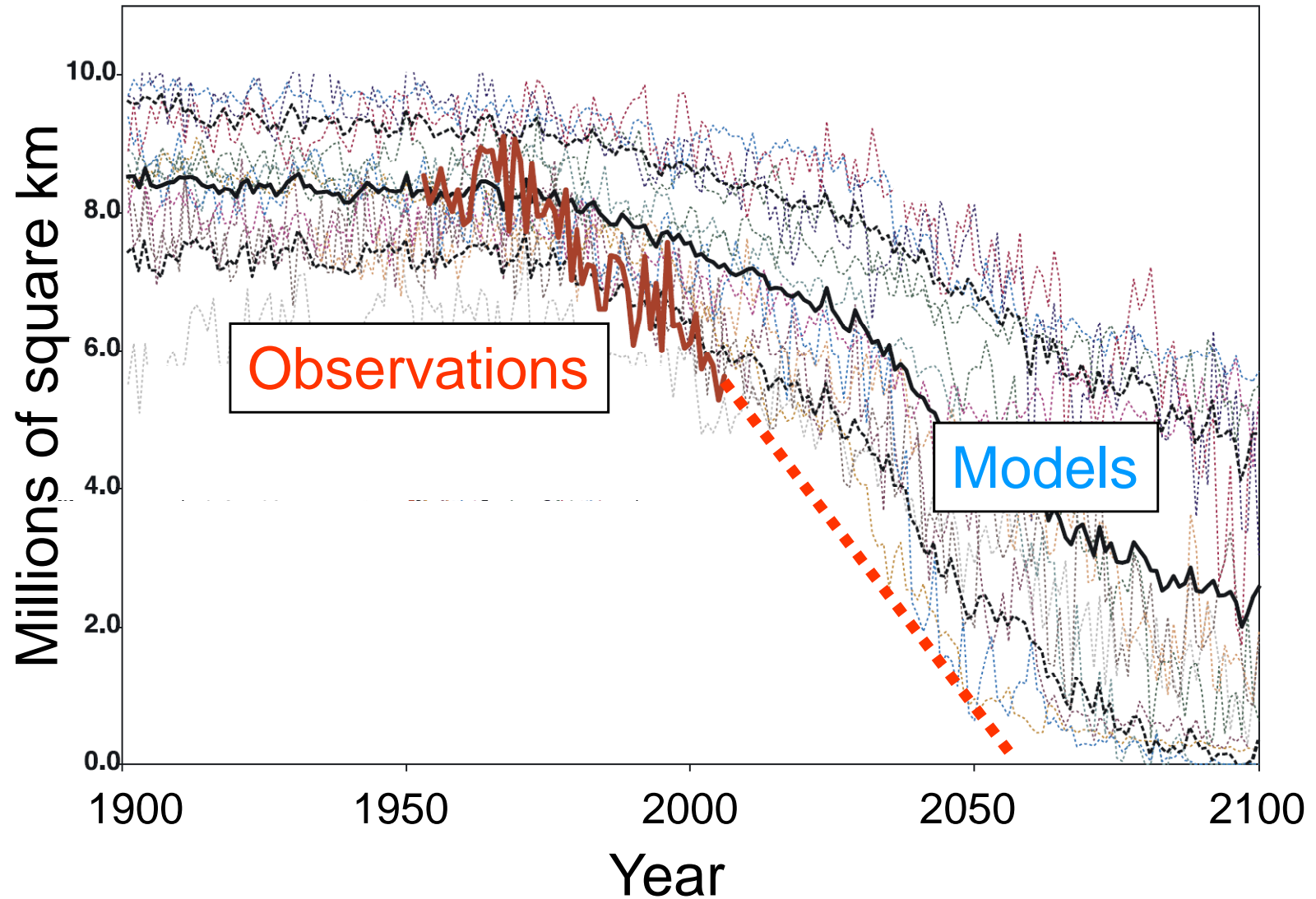
— Observations
— Climate Models



What About the Next 20 Years?



Expect No Summer Sea-Ice



Key Messages Again

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