

The Copenhagen Diagnosis

Updating the World on the Latest Climate Science



The Copenhagen Diagnosis, 2009: Updating the World on the Latest Climate Science.

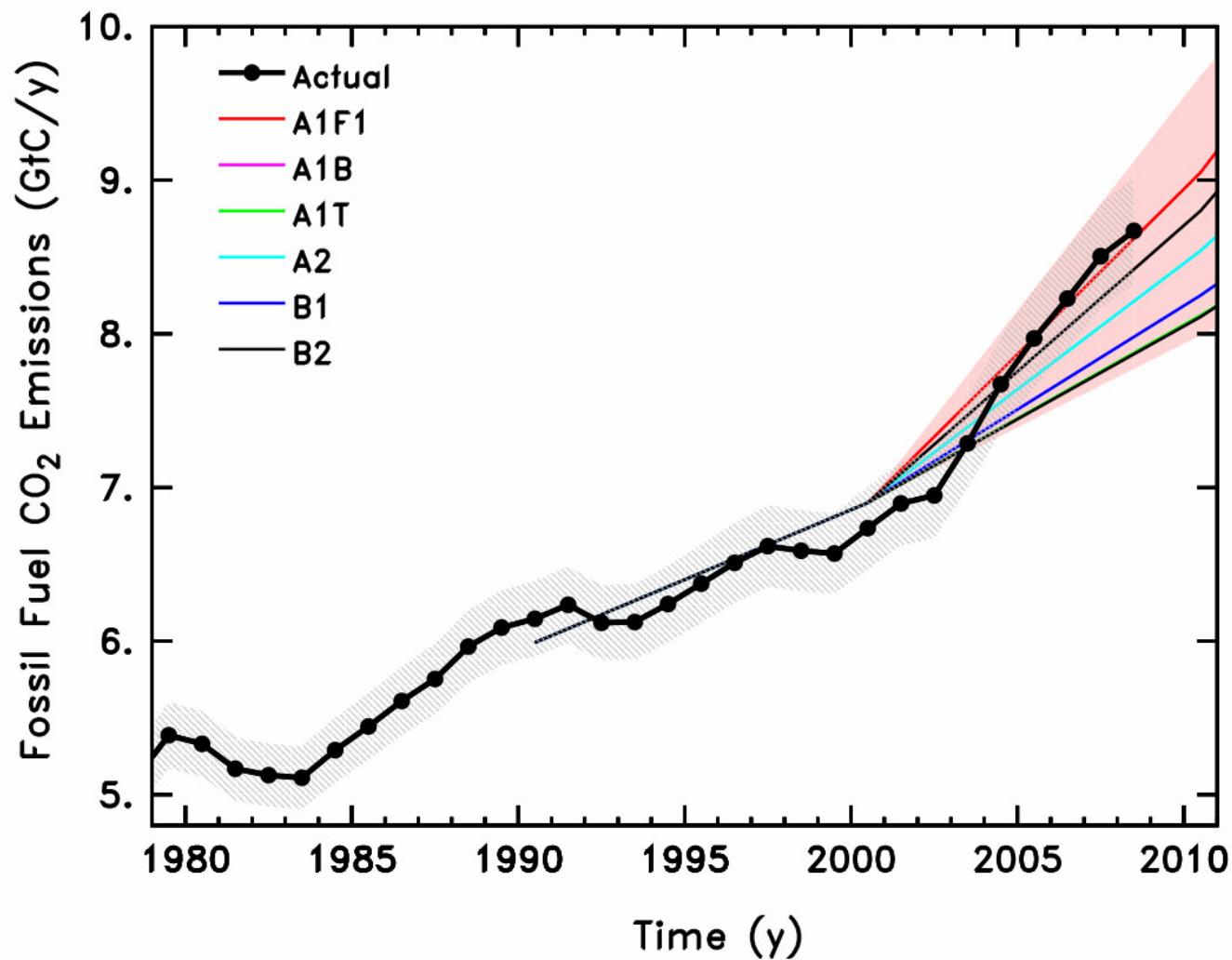
*Ian Allison, Nathan Bindoff, Robert Bindschadler, Peter Cox,
Nathalie de Noblet-Ducoudre , Matthew England, Jane Francis,
Nicolas Gruber, Alan Haywood , David Karoly , Georg Kaser,
Corinne Le Quéré, Tim Lenton, Michael Mann, Ben McNeil,
Andy Pitman, Stefan Rahmstorf , Eric Rignot, Hans Joachim
Schellnhuber, Stephen Schneider, Steven Sherwood, Richard
Somerville, Konrad Steffen, Eric Steig, Martin Visbeck, Andrew
Weaver.*

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Figure 1: Global CO₂ Emissions from Fossil Fuels



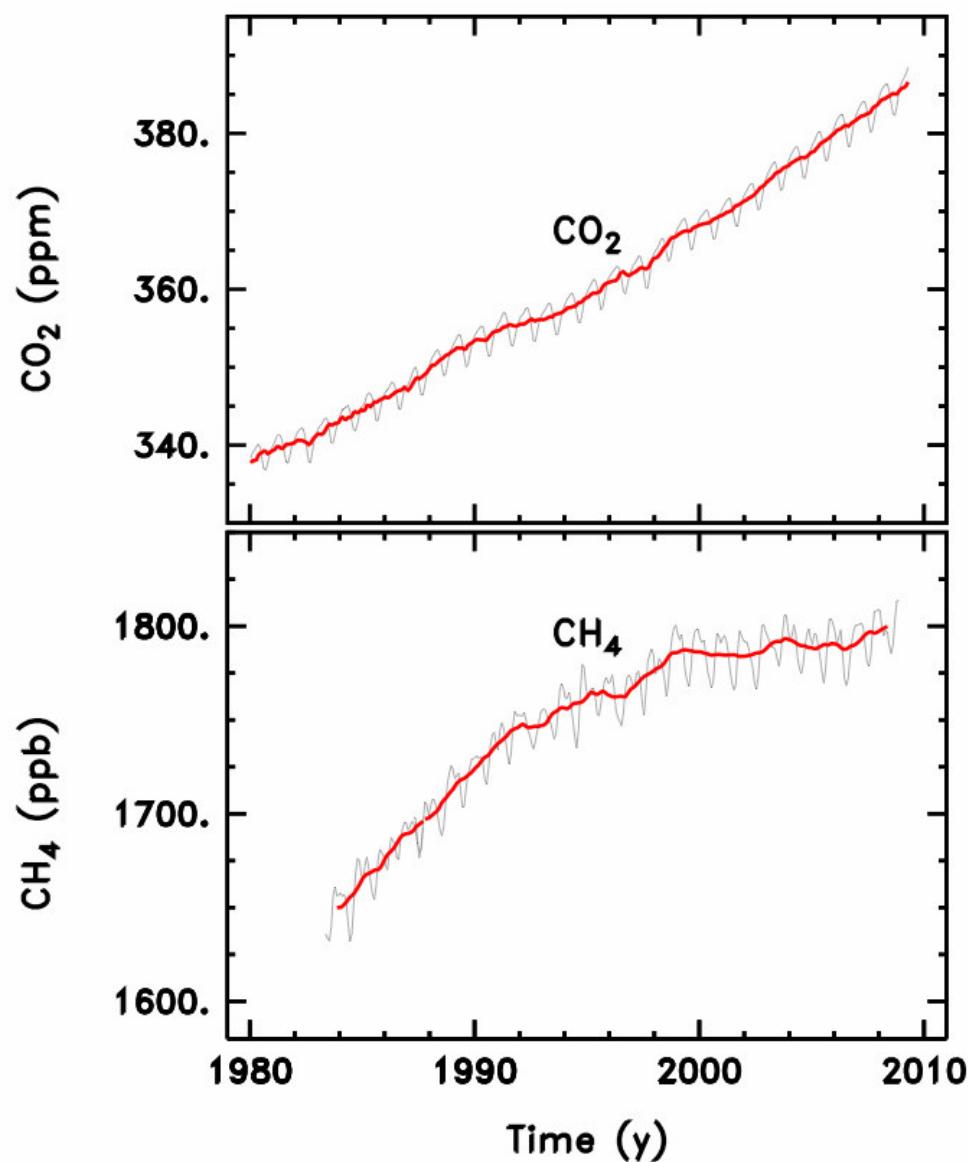
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Figure 2: Atmospheric concentration of carbon dioxide (CO_2) and methane (CH_4)



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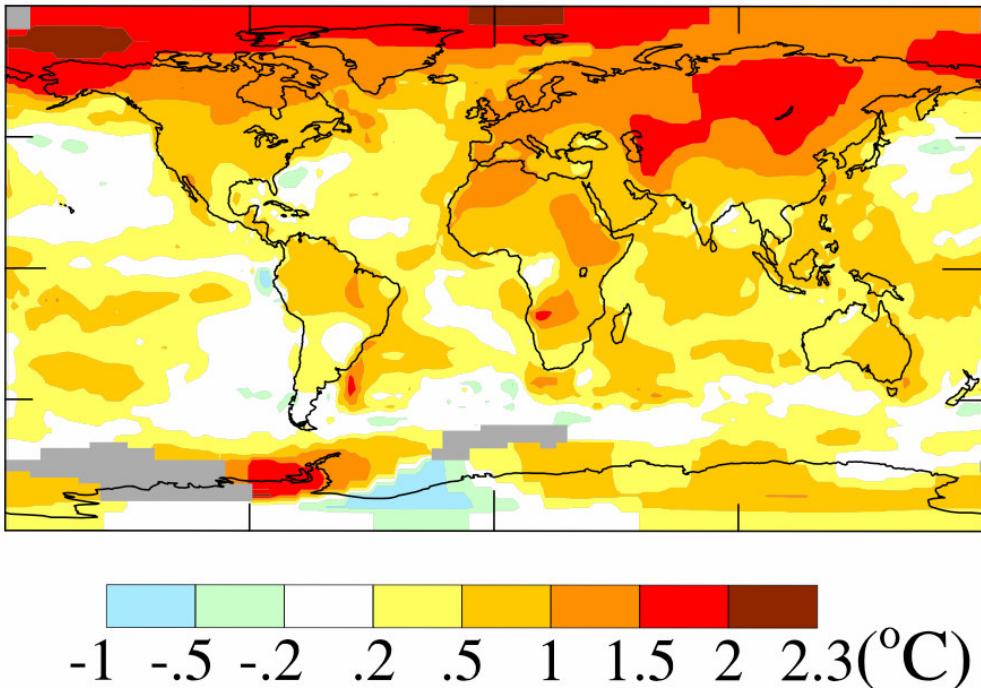
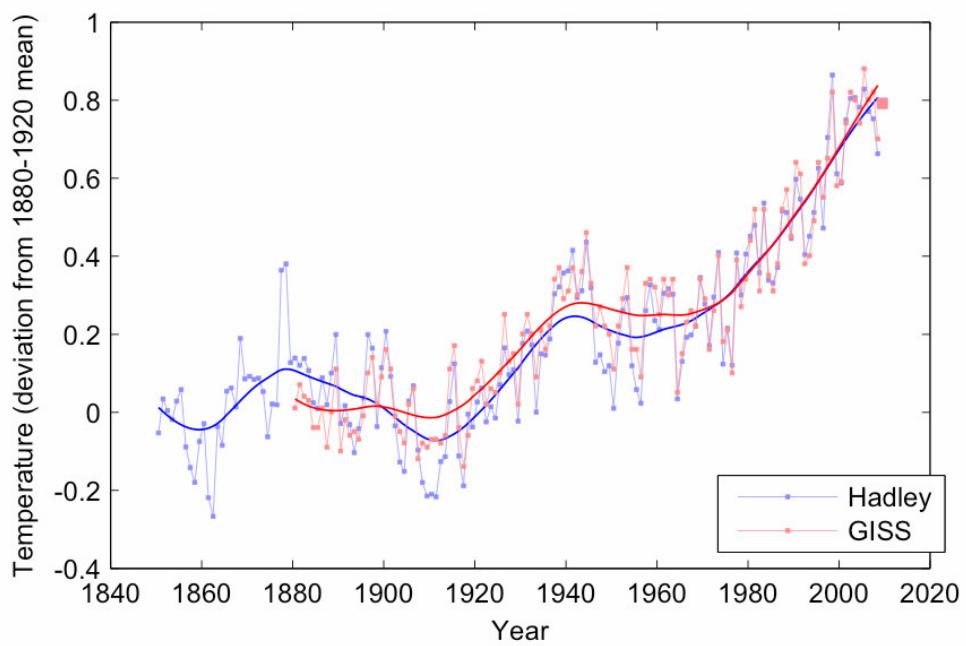


Figure 3: (Top) Mean temperature change between 1950's and 2000's: (Bottom) Global average temperature change from 1850



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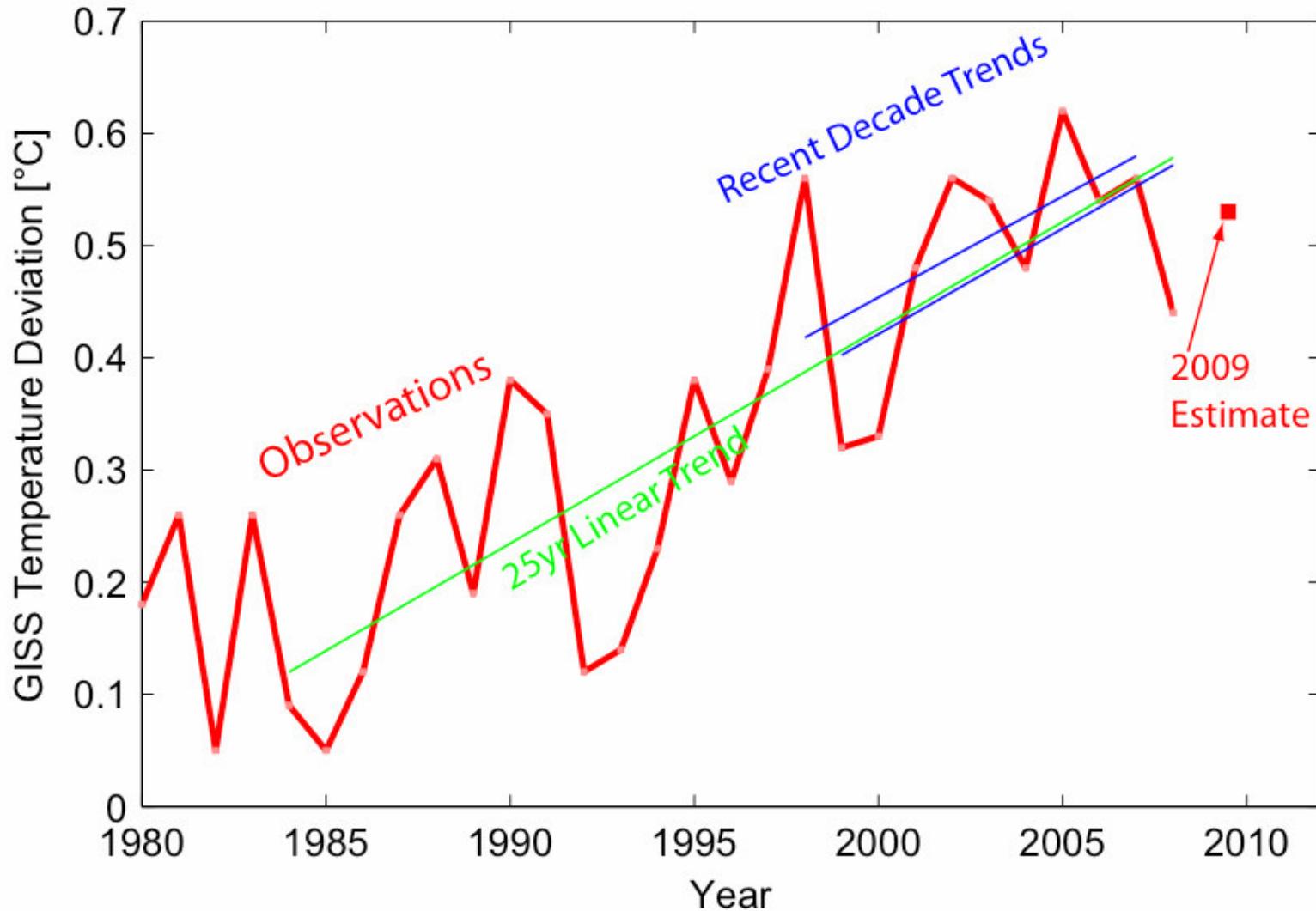


Figure 4: Global Temperature Change since 1980
from GISS data



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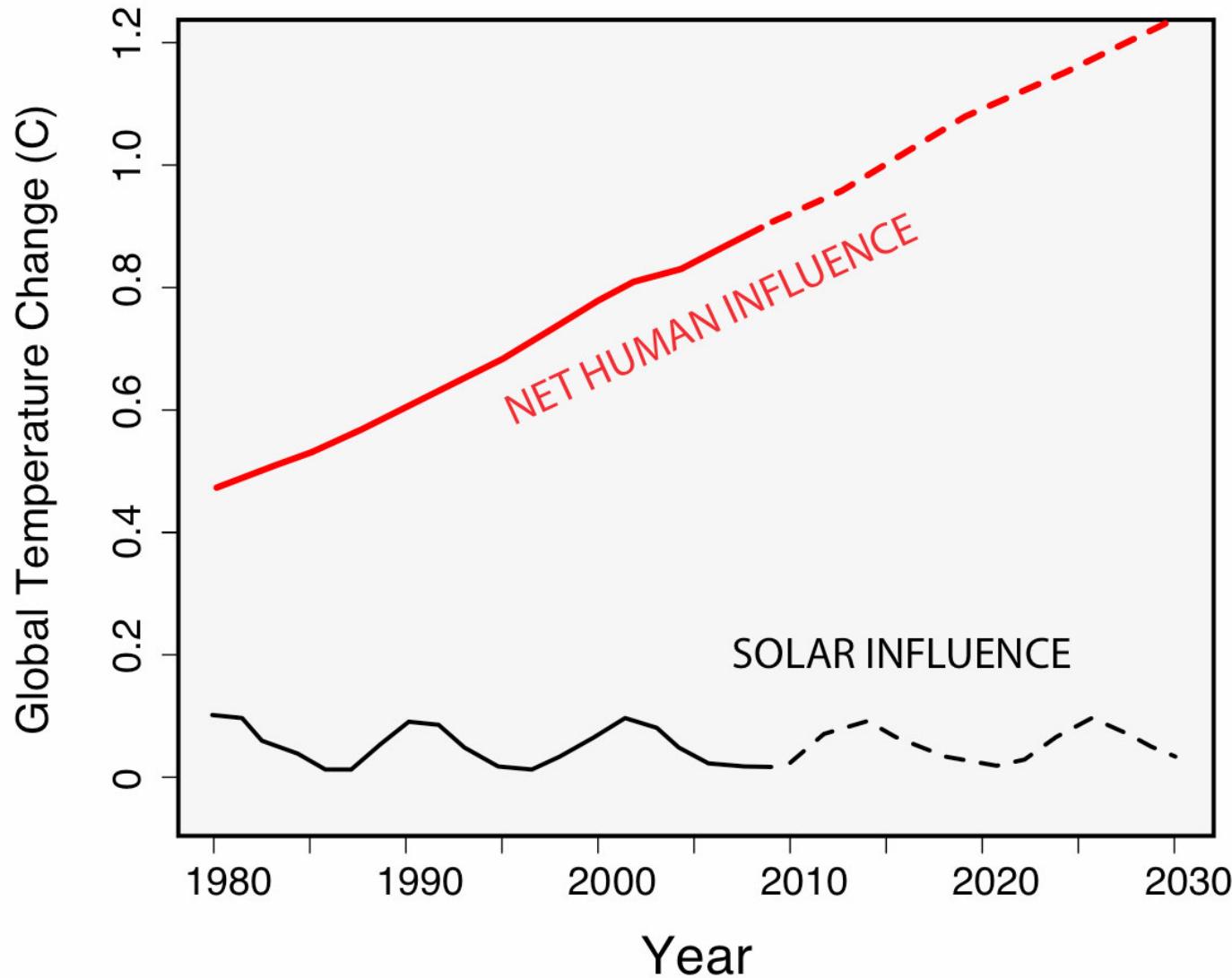


Figure 5: Human versus Solar influence since 1980 and projections to 2030

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U.S. Climate Extremes Index: Step4

Annual (Jan–Dec)
1910–2008

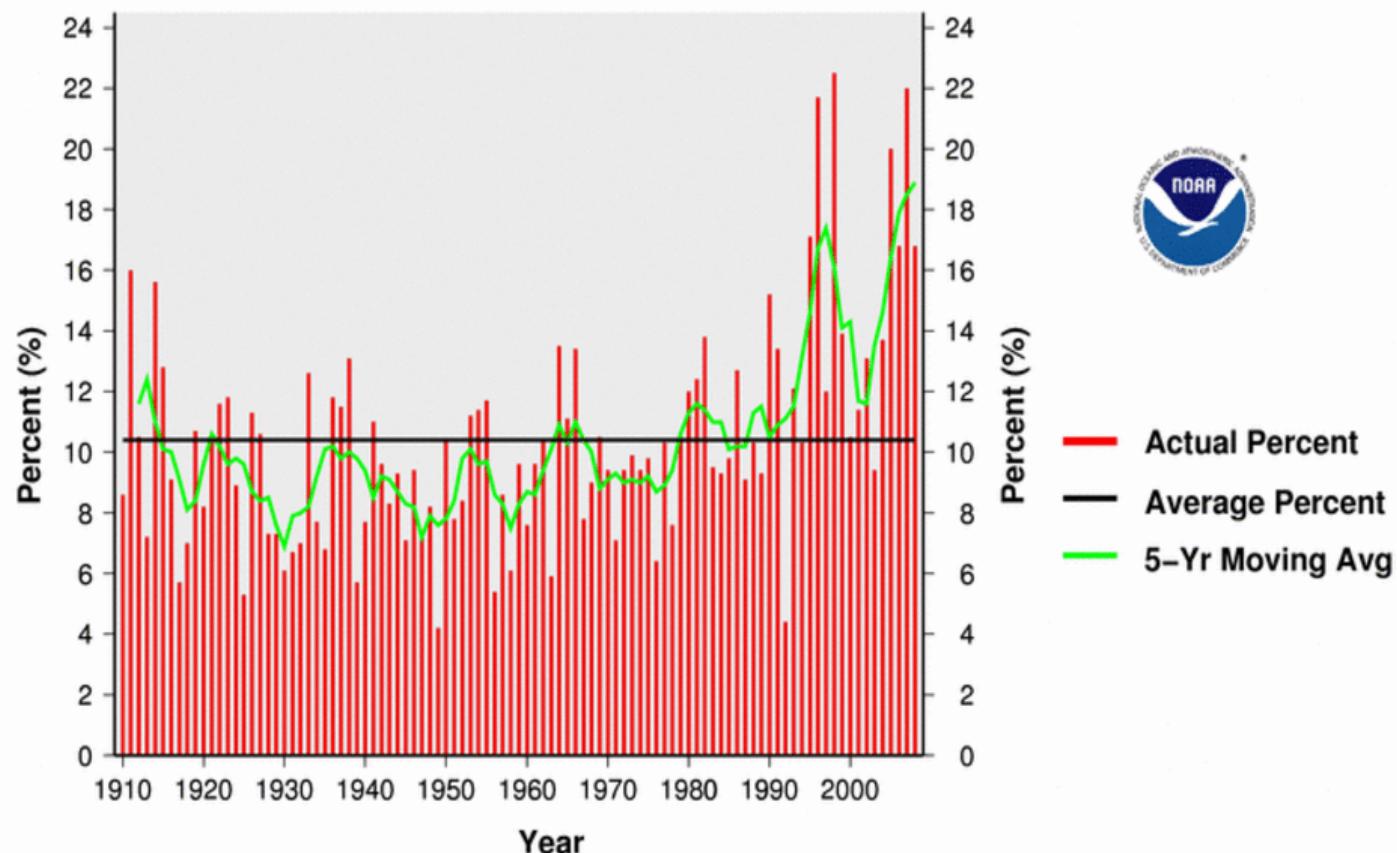


Figure 6: United States climatic extremes since 1910

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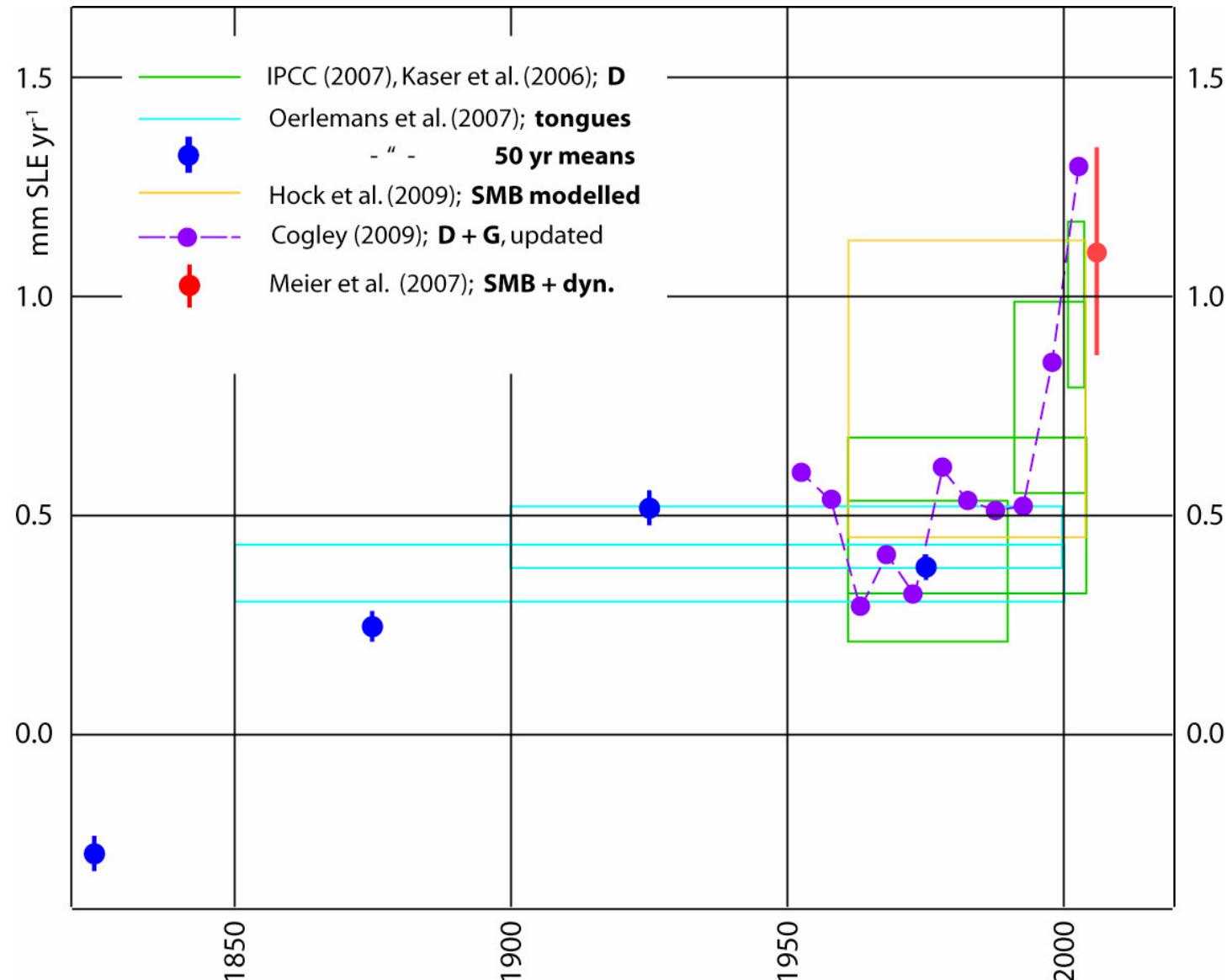


Figure 7: Contribution of glaciers and ice-caps to global sea-level

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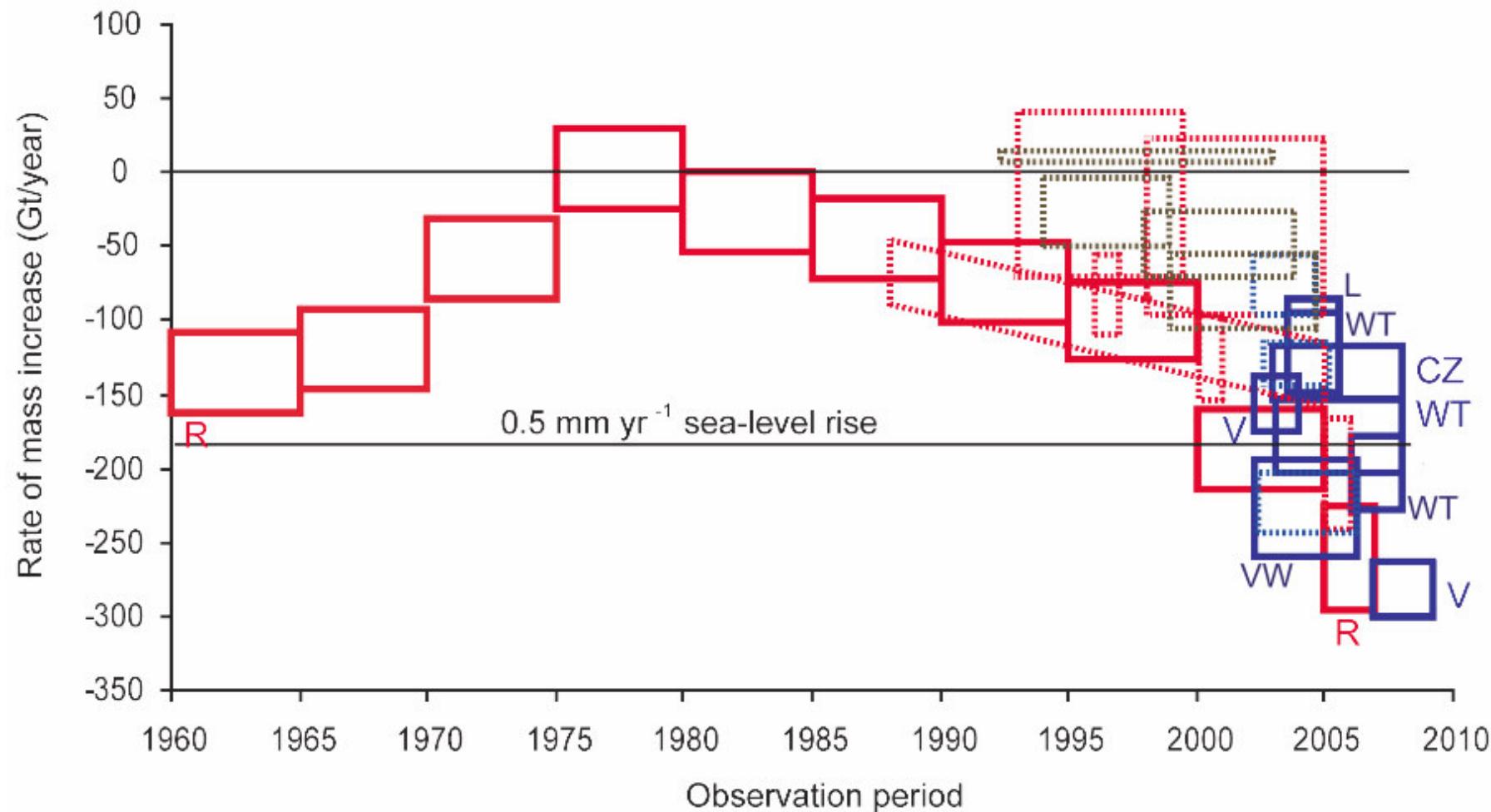


Figure 8: Greenland ice loss since 1960

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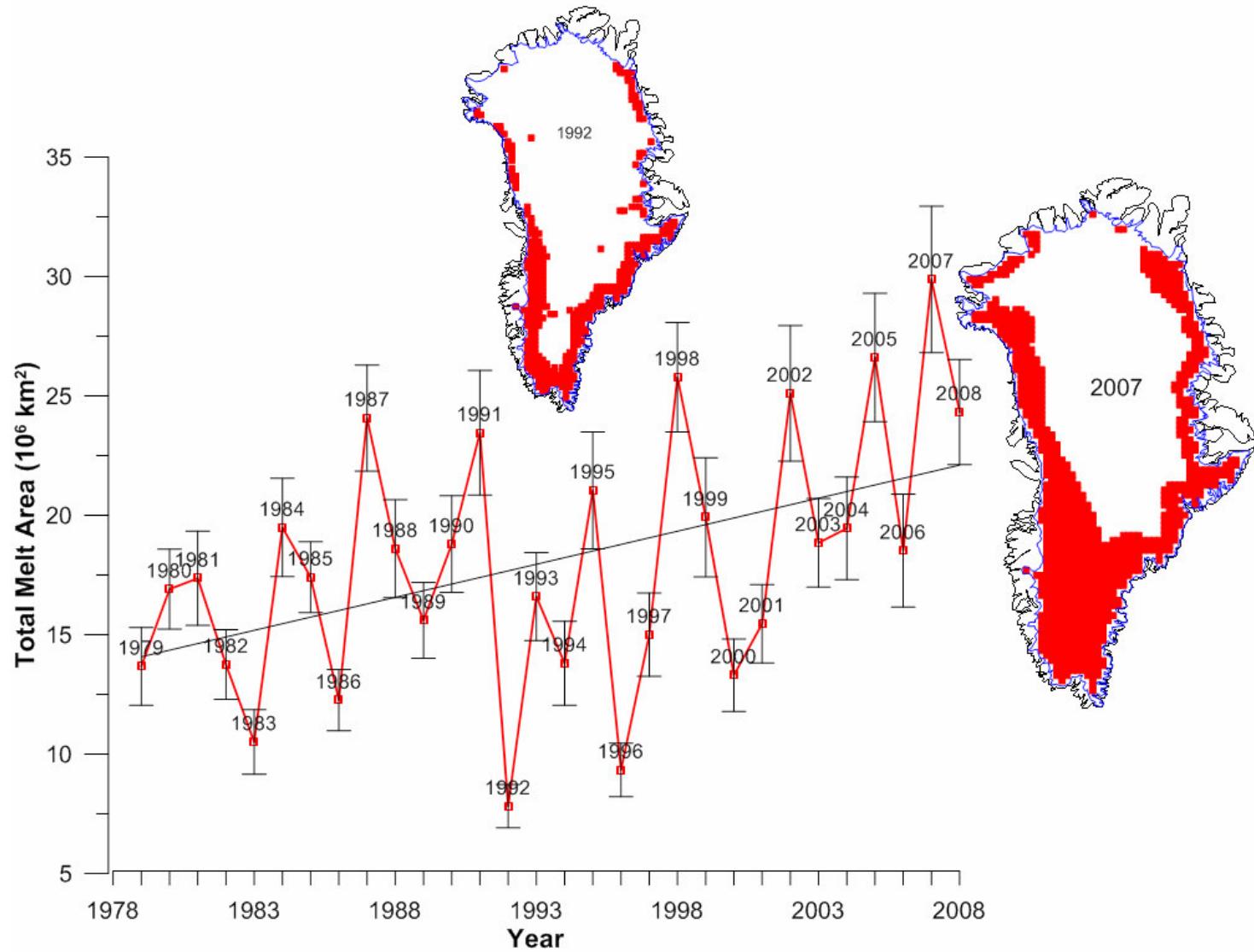


Figure 9: Greenland ice-melt since 1979

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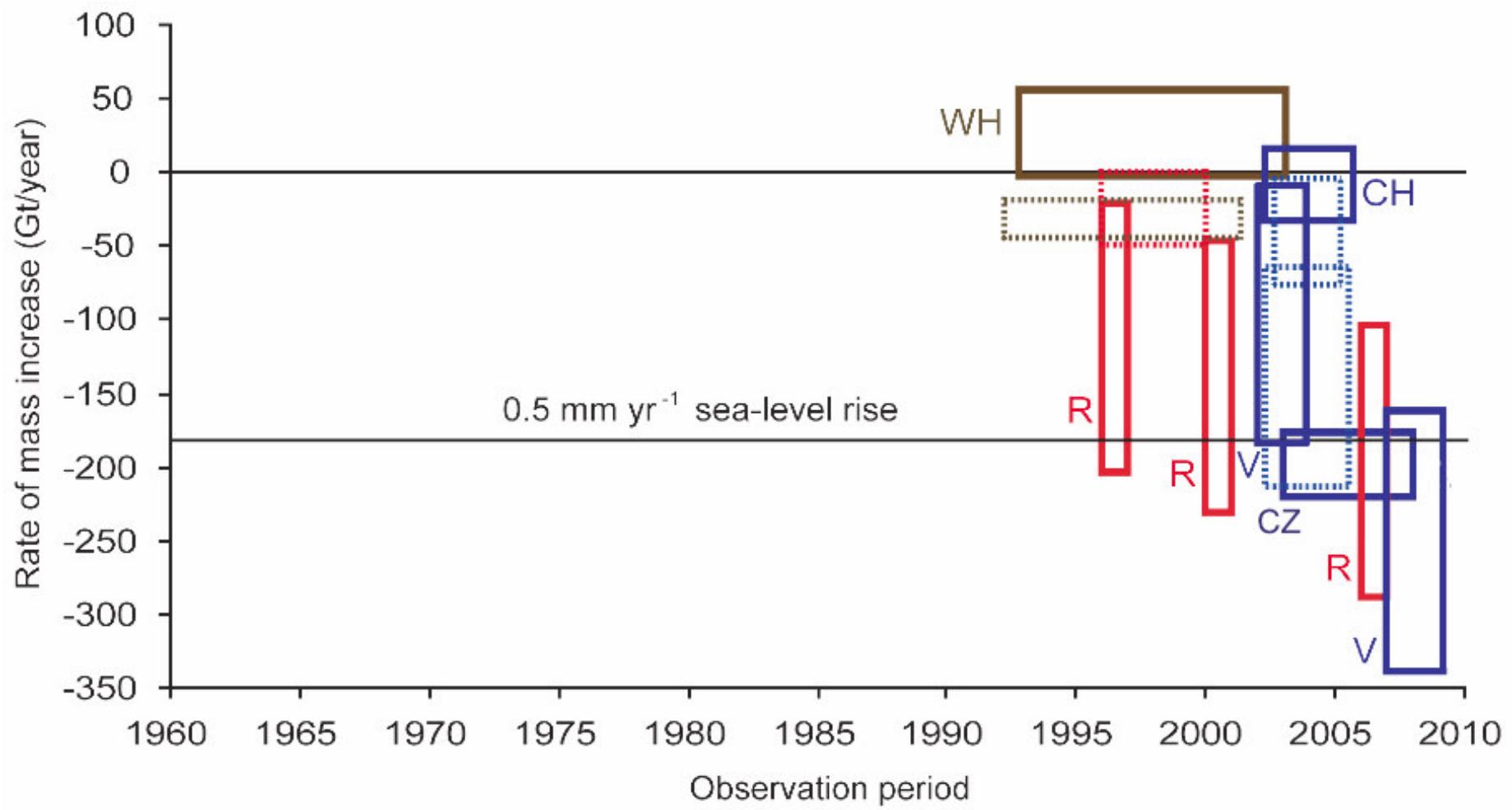


Figure 10: Antarctic ice loss since 1960

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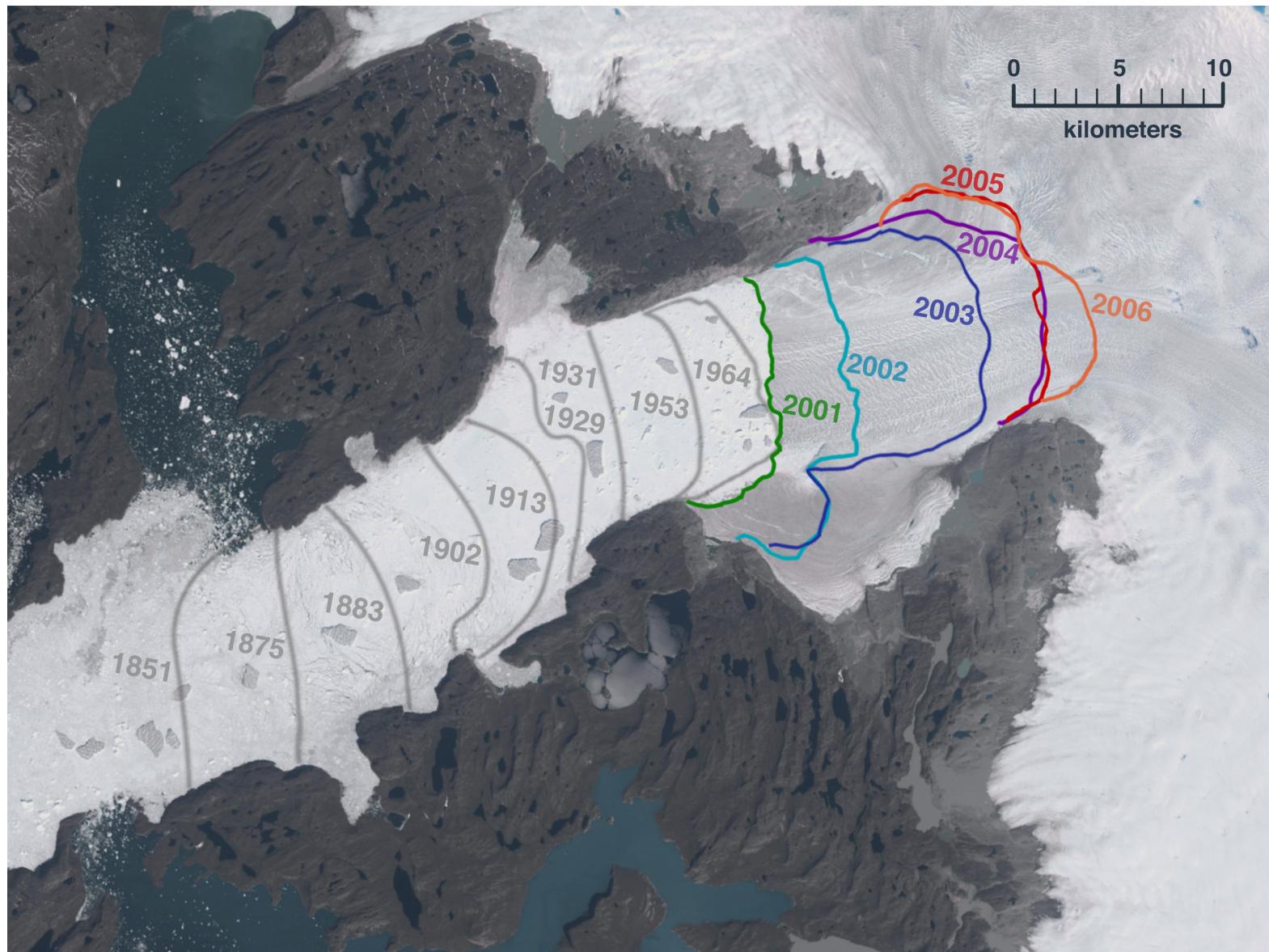


Figure 11: Jakobshaven Isbrae ice shelf calving since 1851

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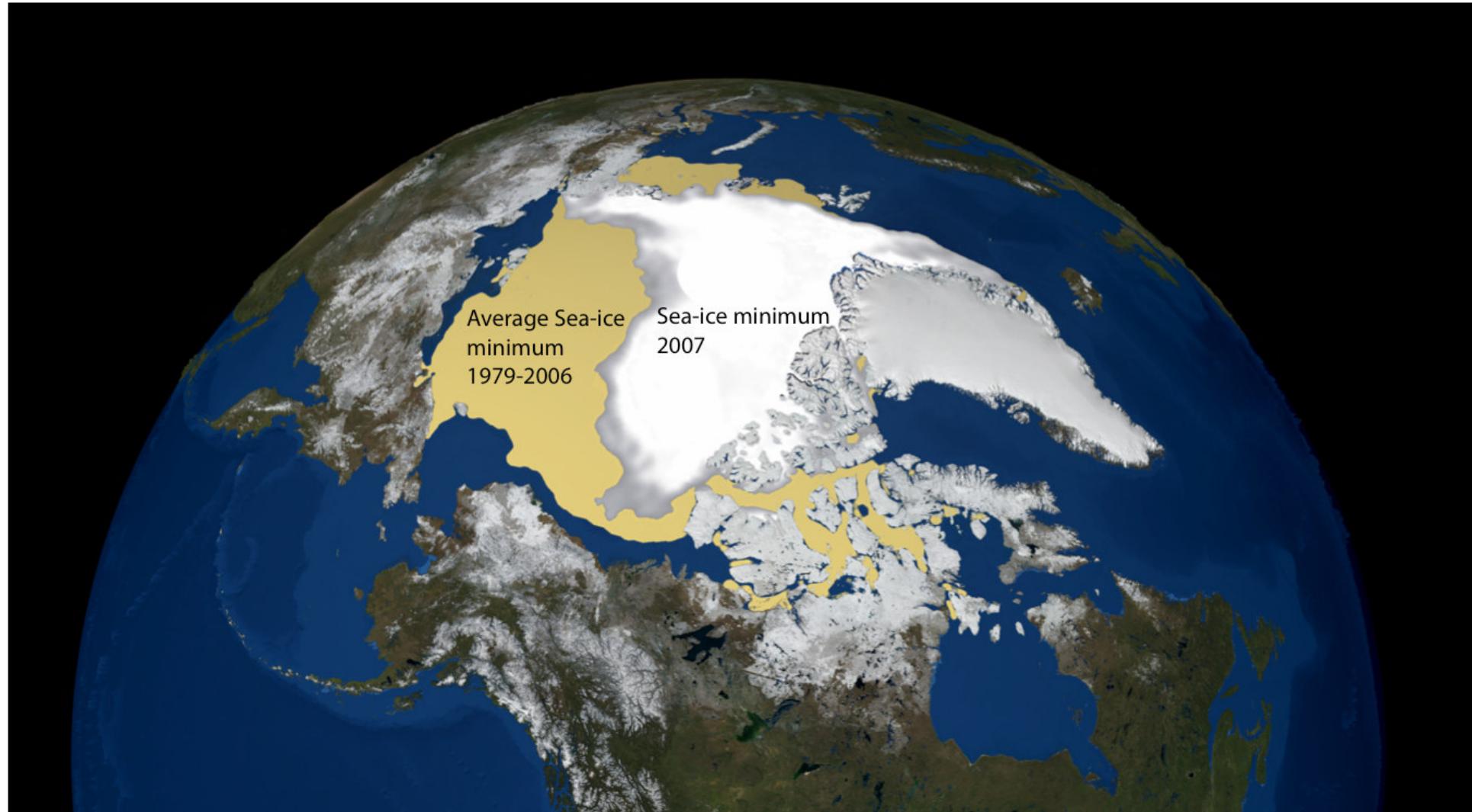


Figure 12: Minimum arctic sea-ice extent from 1979 to 2007

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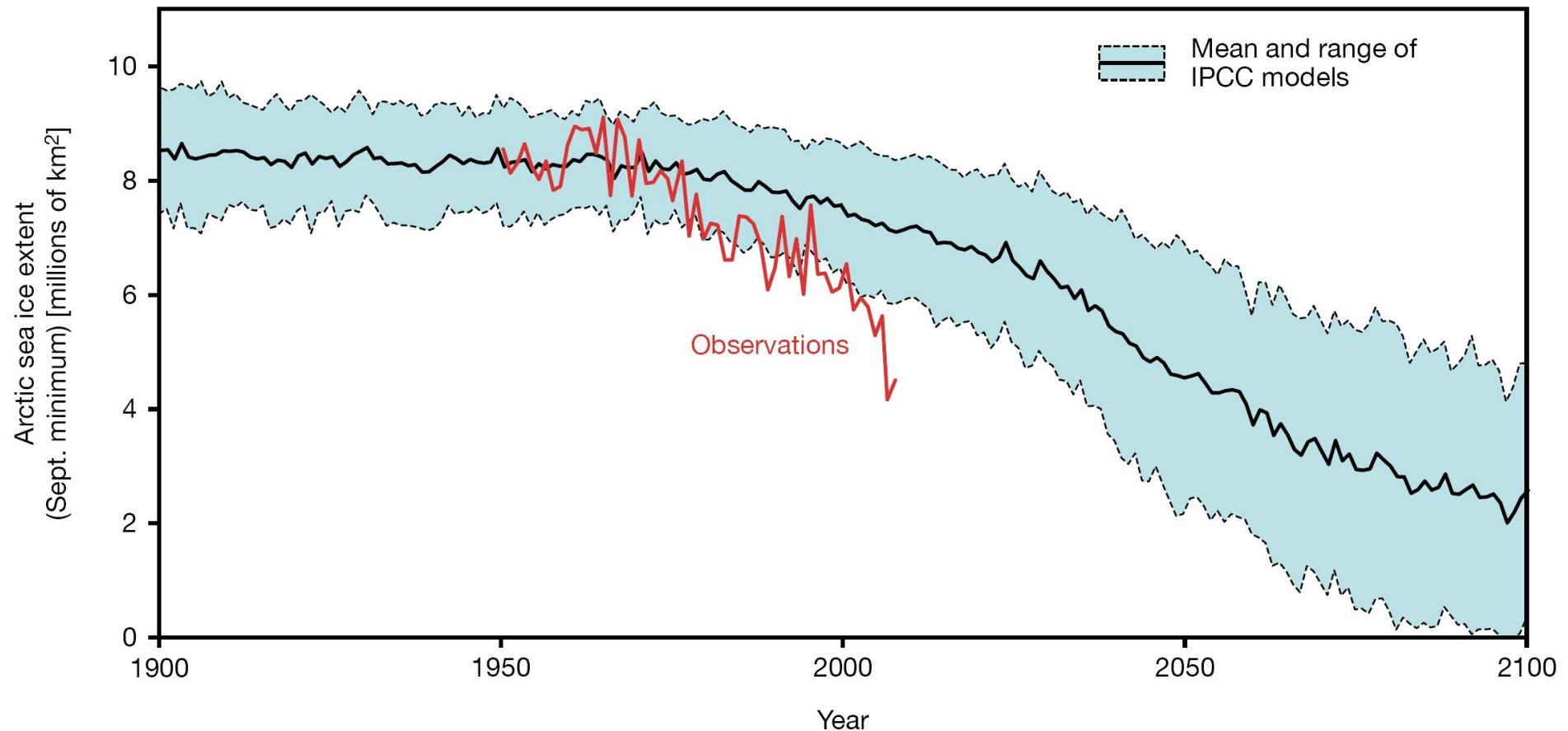


Figure 13: Observed and modeled Arctic sea-ice extent



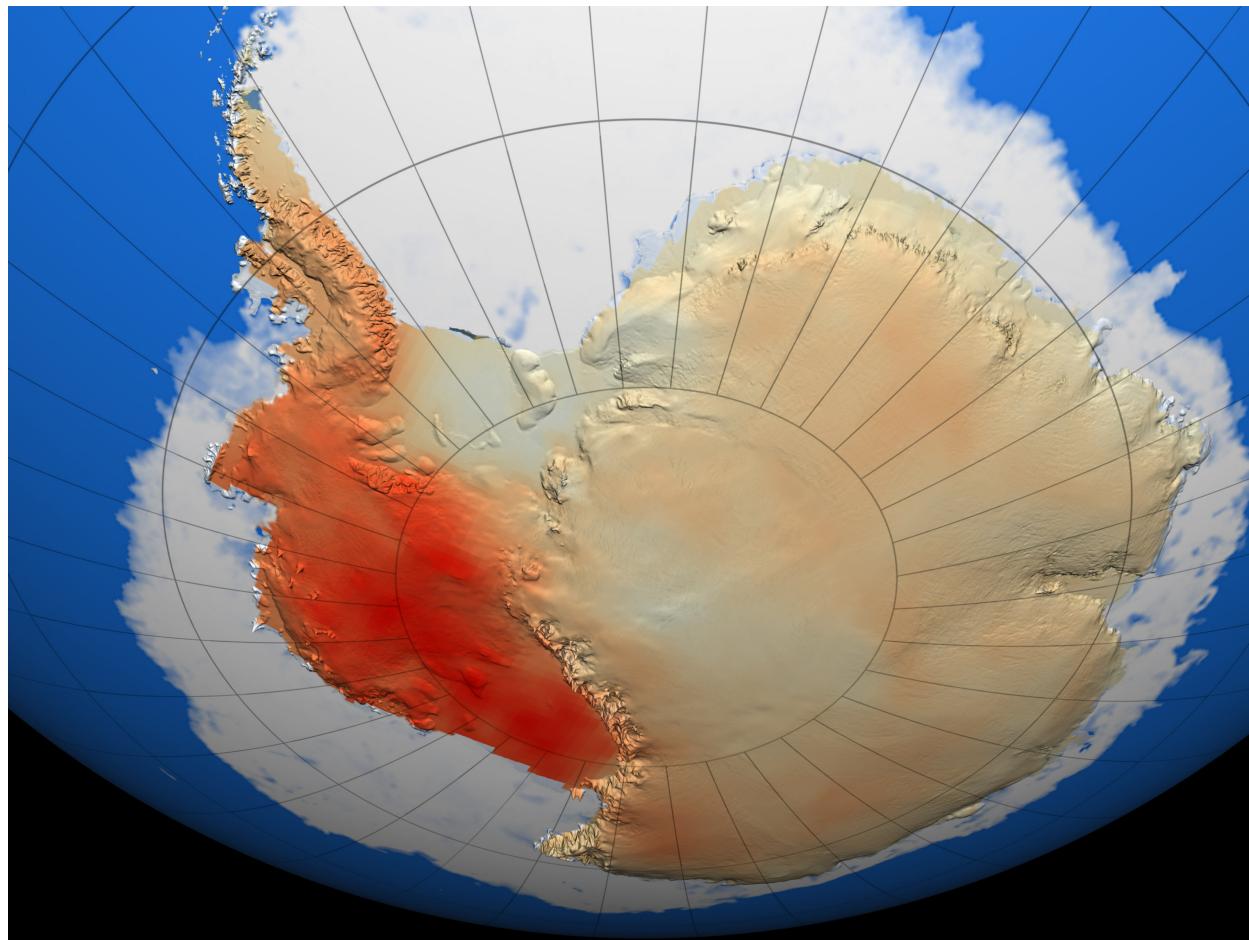


Figure 14: Observed Antarctic
Warming Trend ($^{\circ}\text{C}/\text{decade}$) from
1957-2006

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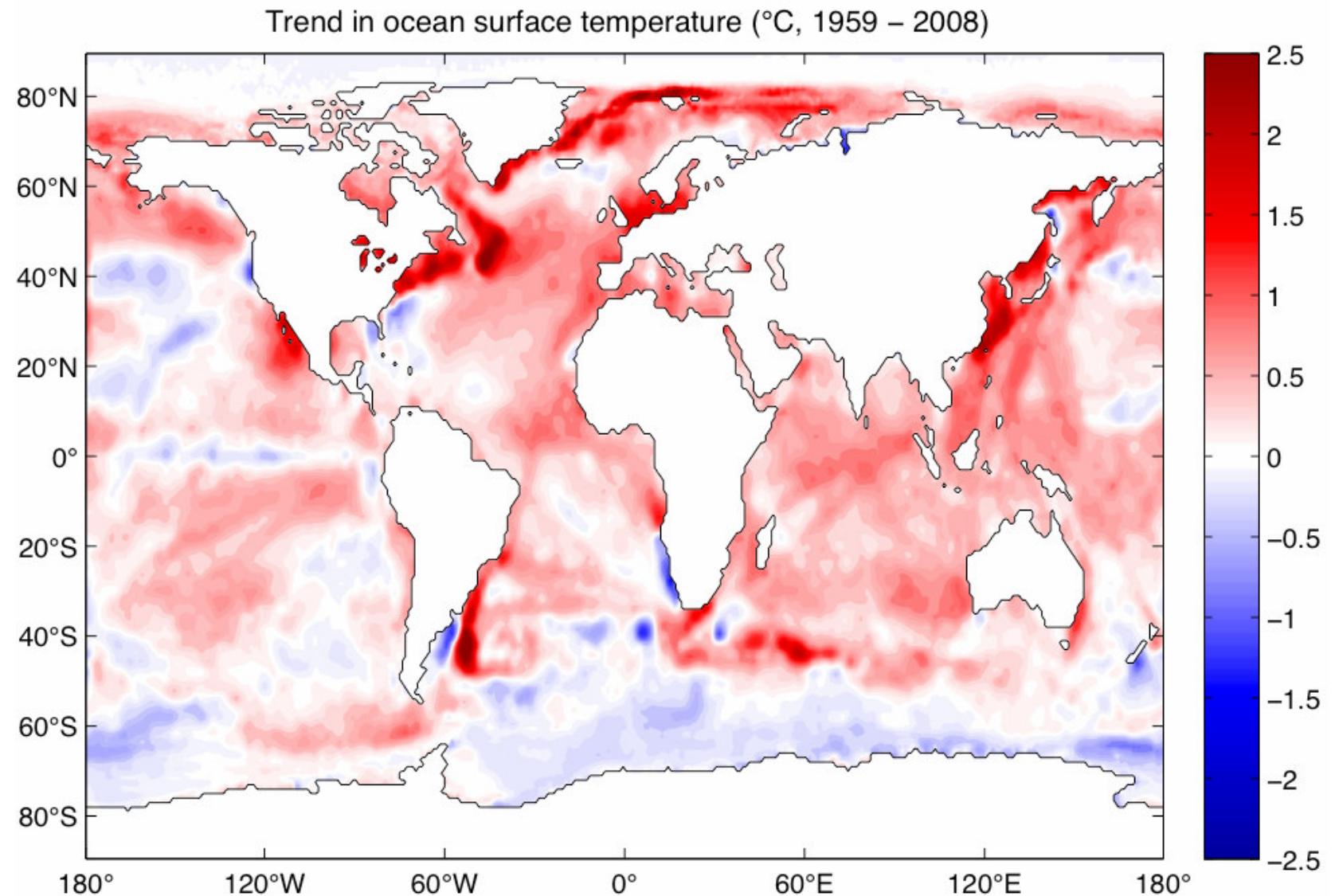


Figure 15

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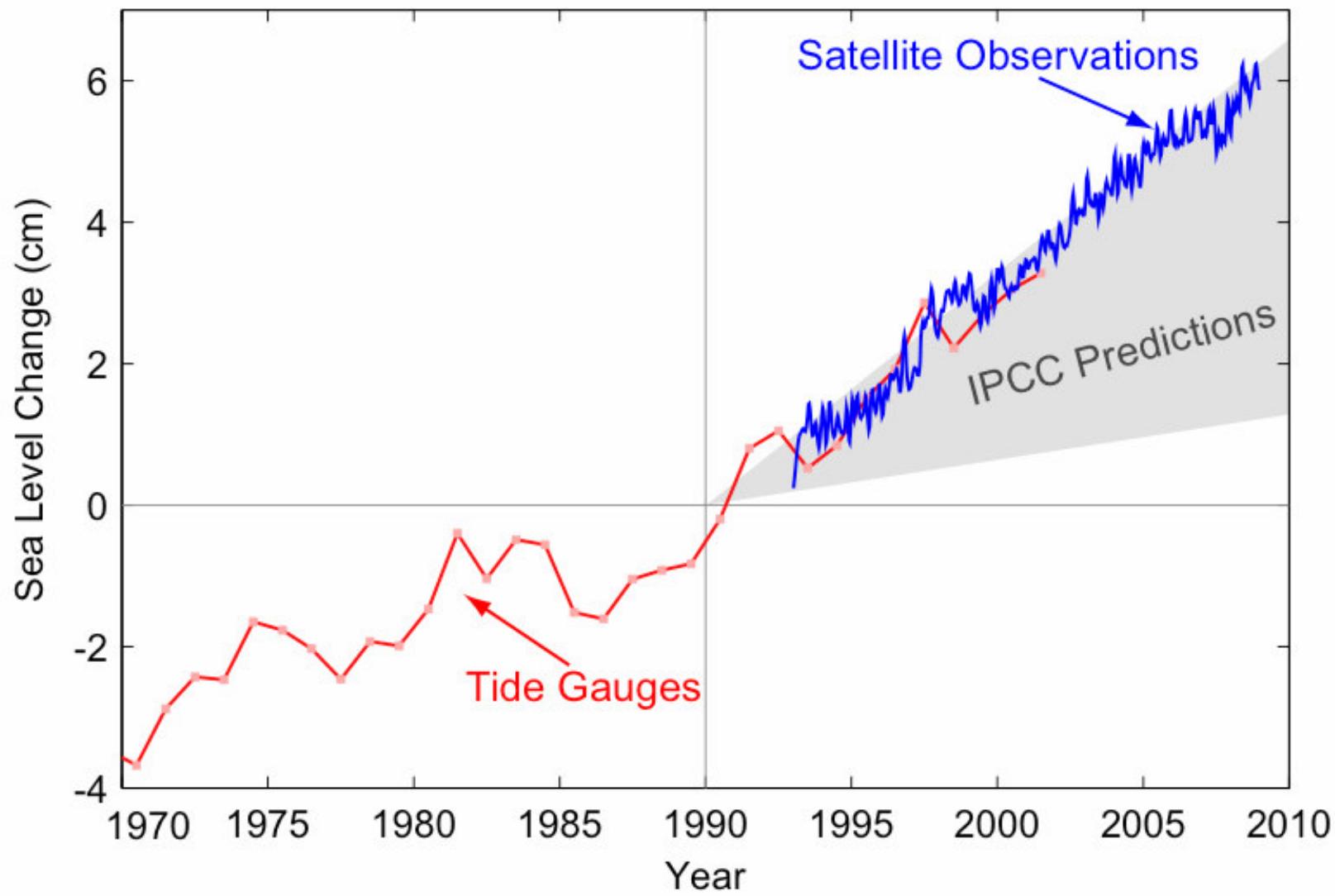


Figure 16: Sea-level change 1970-2010

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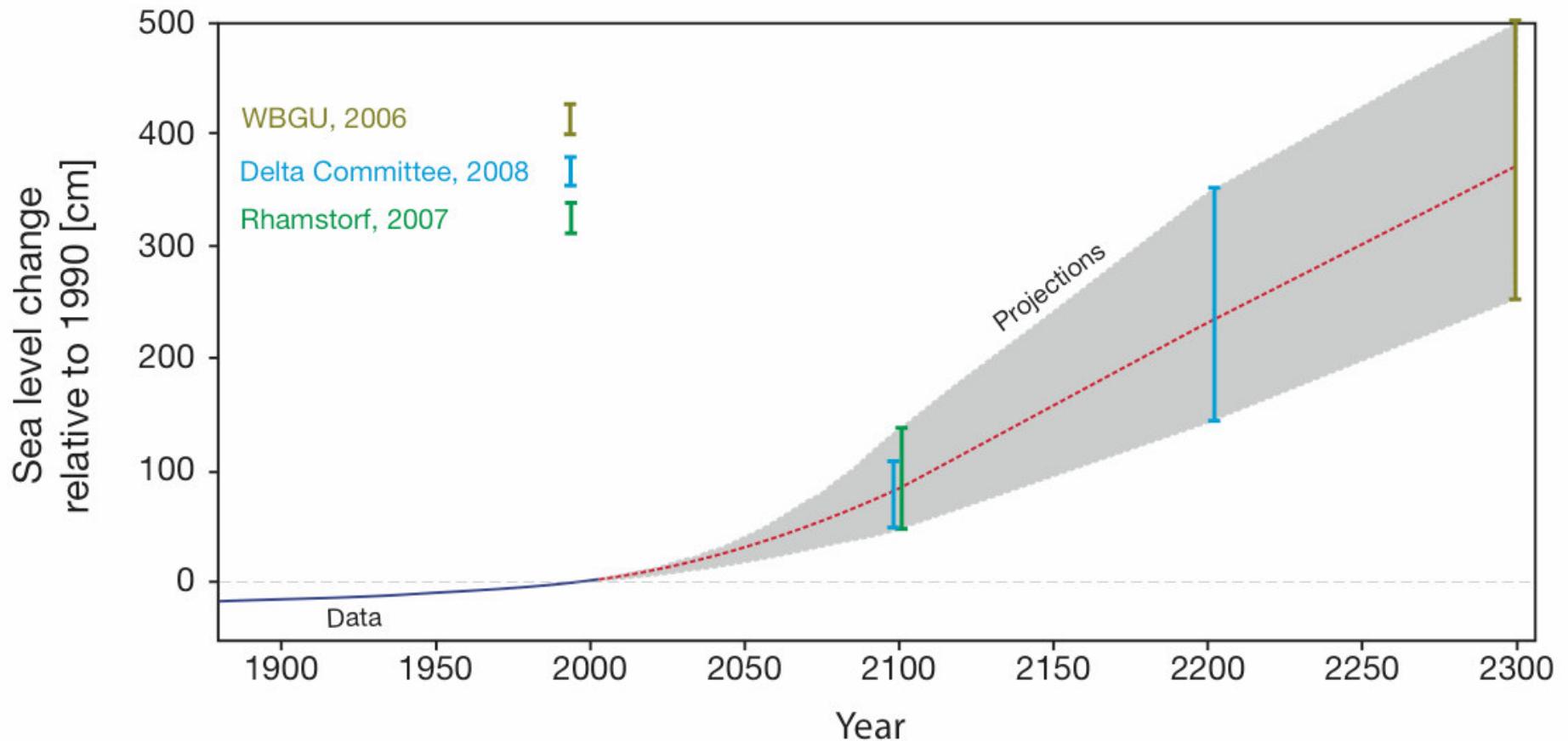


Figure 17: Past and future sea-level projections



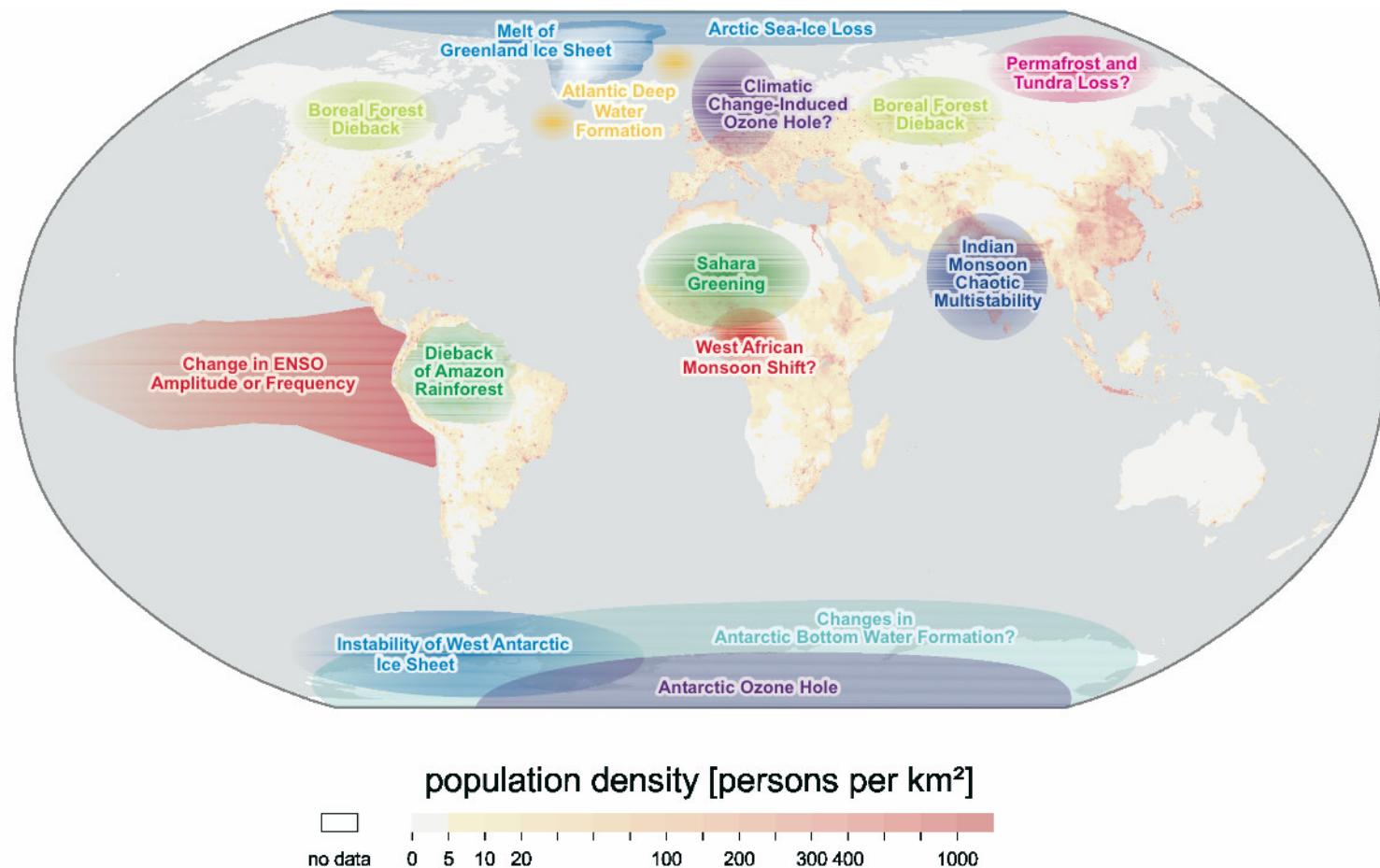


Figure 18: Major tipping-points in the climate system

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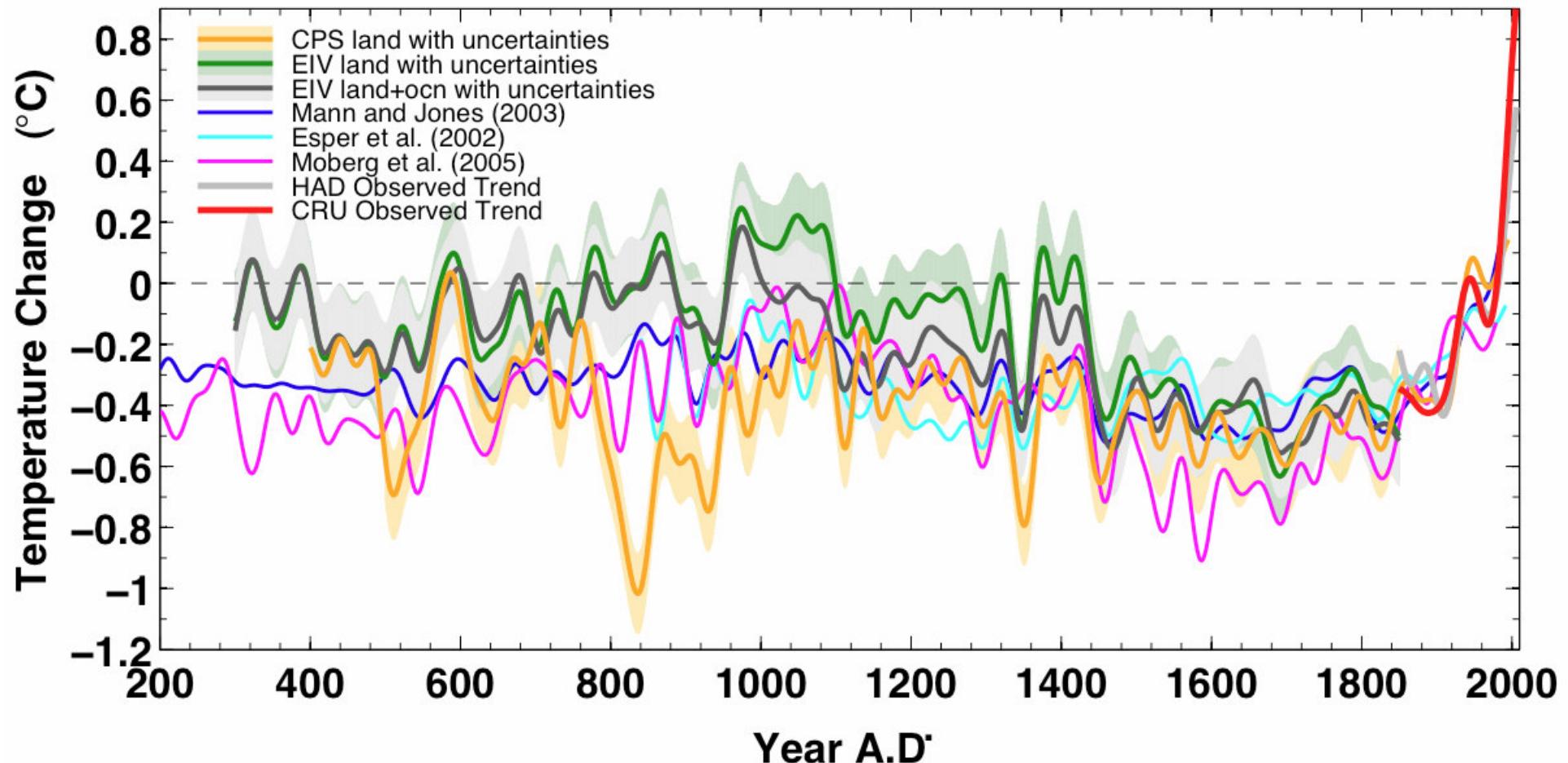


Figure 19: Northern Hemisphere reconstructed temperature change since 200AD



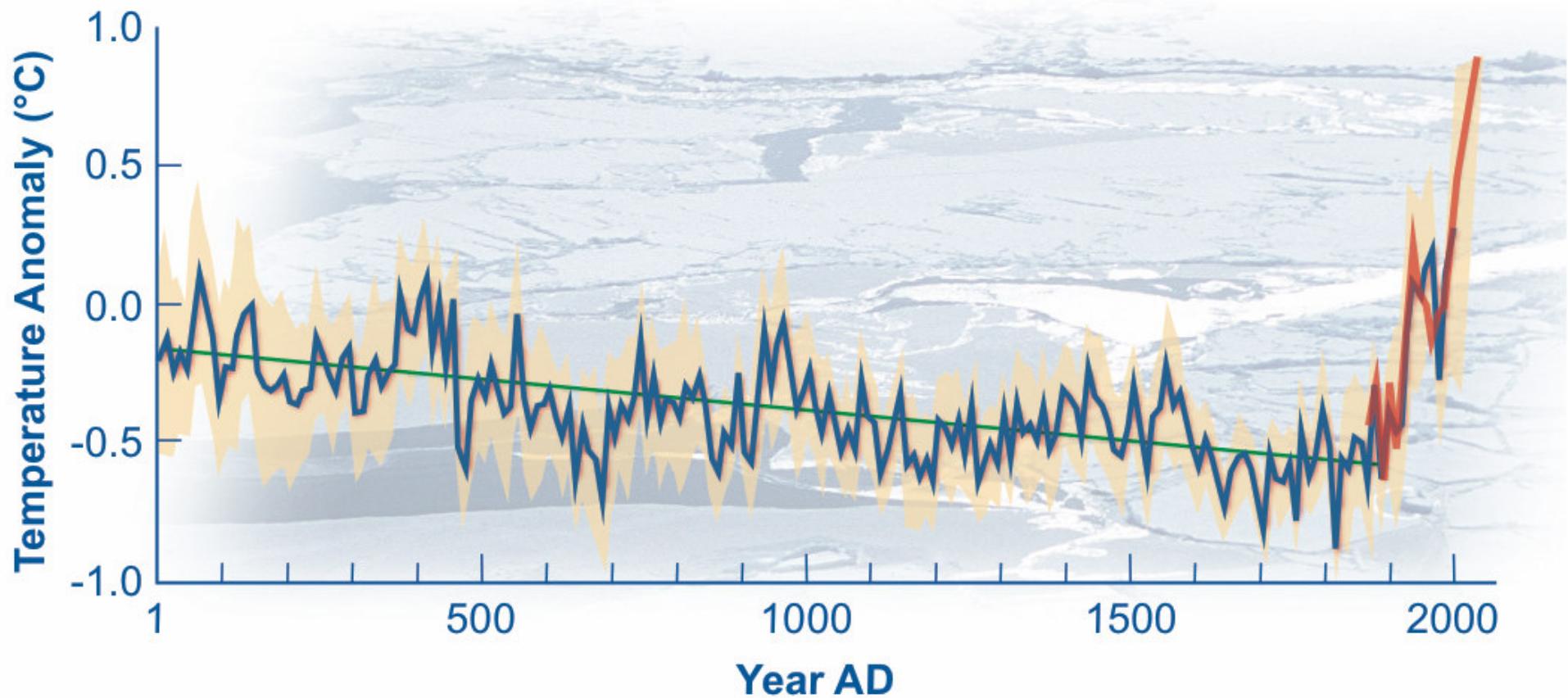


Figure 20: Arctic air temperature change
reconstructed (blue), observed (red)

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Global Temperature Relative to 1800-1900 ($^{\circ}\text{C}$)

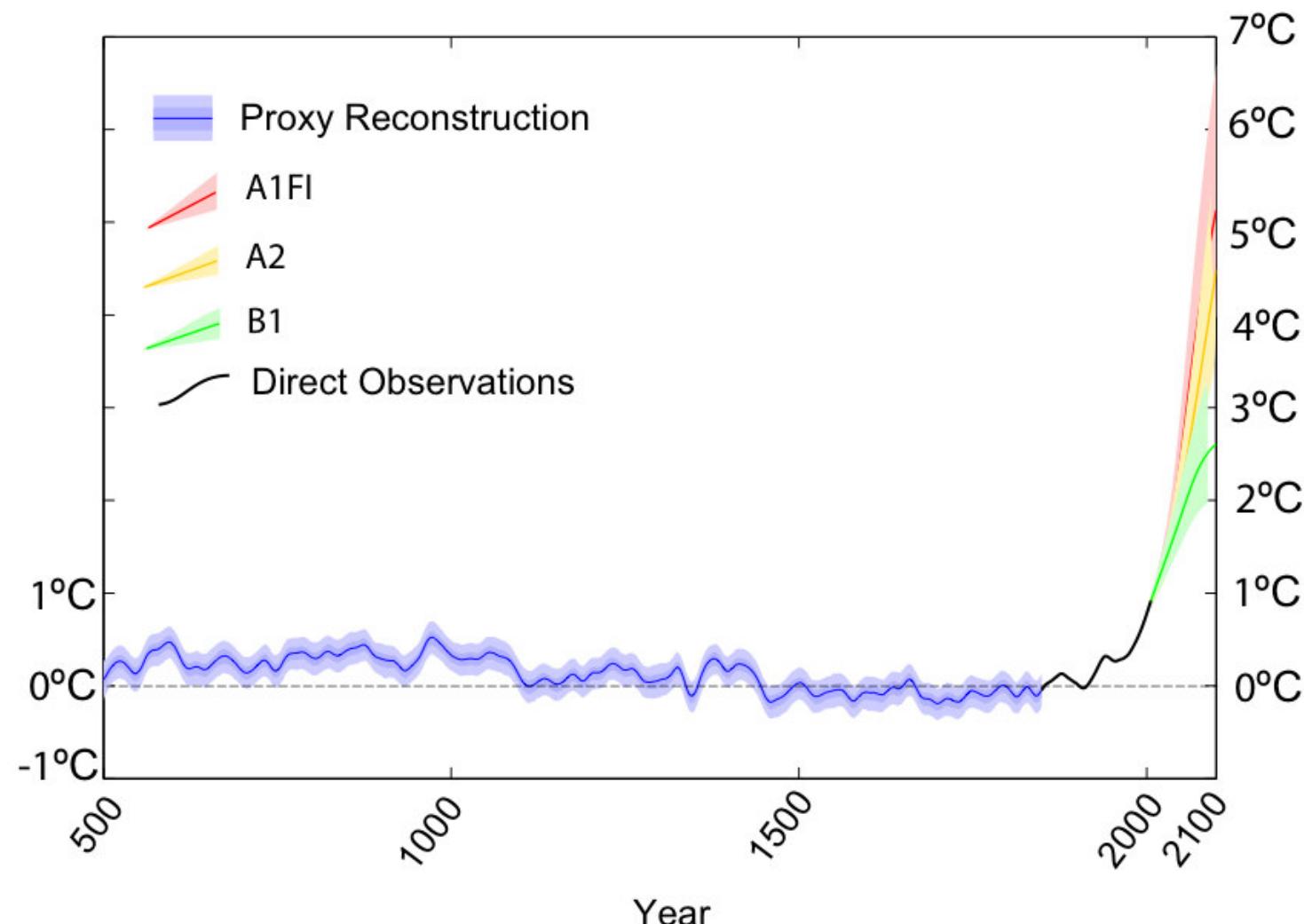


Figure 21: Reconstructed, observed and future warming projections

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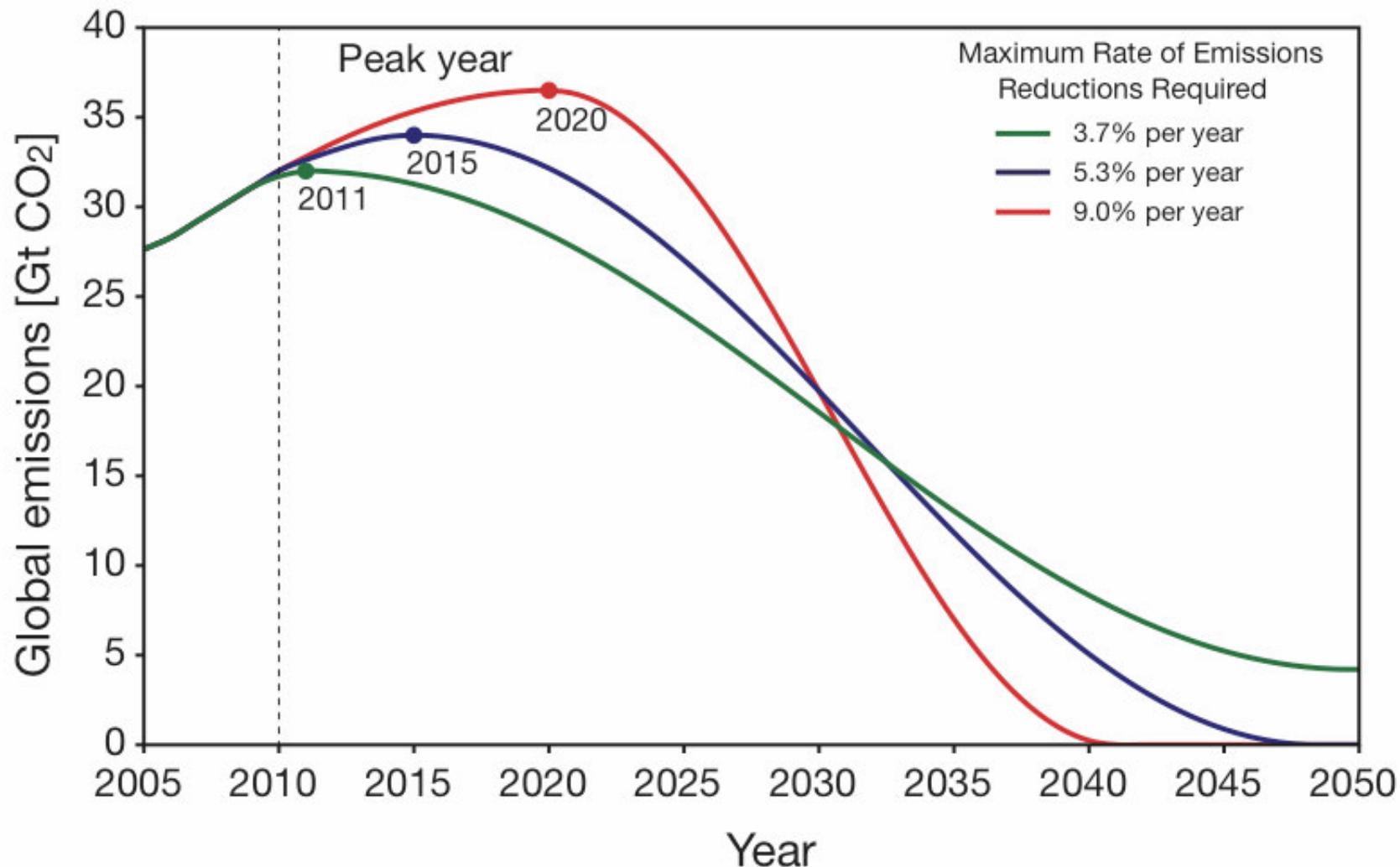


Figure 22: Emissions pathways to give 67% chance of limiting global warming to 2°C

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