

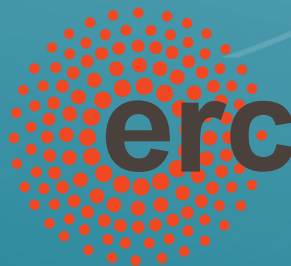


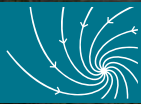
Ice-ocean interactions and the stability of the Greenland ice sheet

Kerim Hestnes Nisancioglu (kerim@uib.no, [@nissenjo](https://twitter.com/nissenjo))

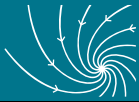
Professor of Climate Dynamics, Department of Earth Science, University of Bergen and leader of the Polar Climate research group at the Bjerknes Centre for Climate Research

Professor II at the Department of Geosciences and the Center for Earth Evolution and Dynamics, University of Oslo





Bjerknes Center 2021: 4 partners - 260 scientists - 36 nations

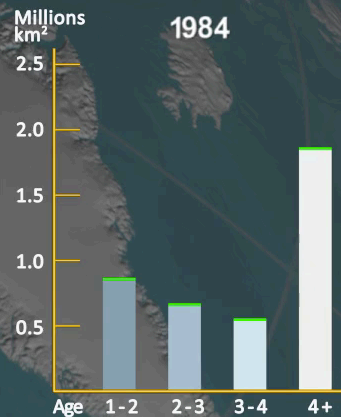


1984

Sea Ice Age

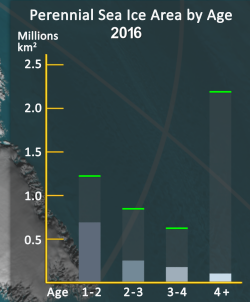
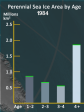


Perennial Sea Ice Area by Age

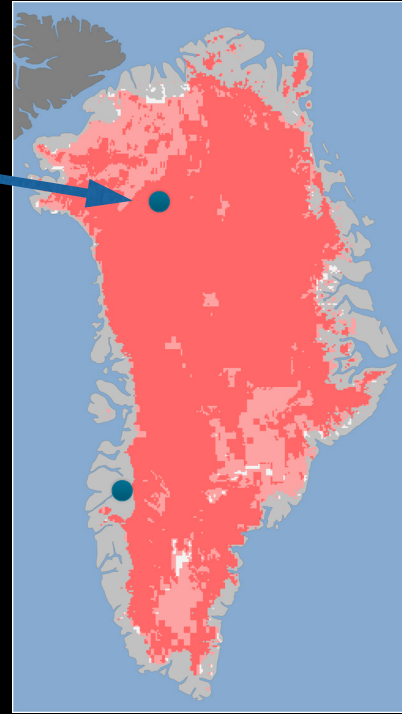


What is the impact on Greenland?

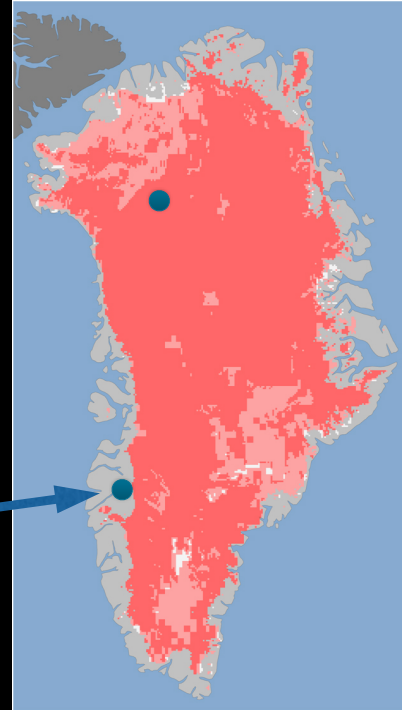
2016



Greenland July 2012

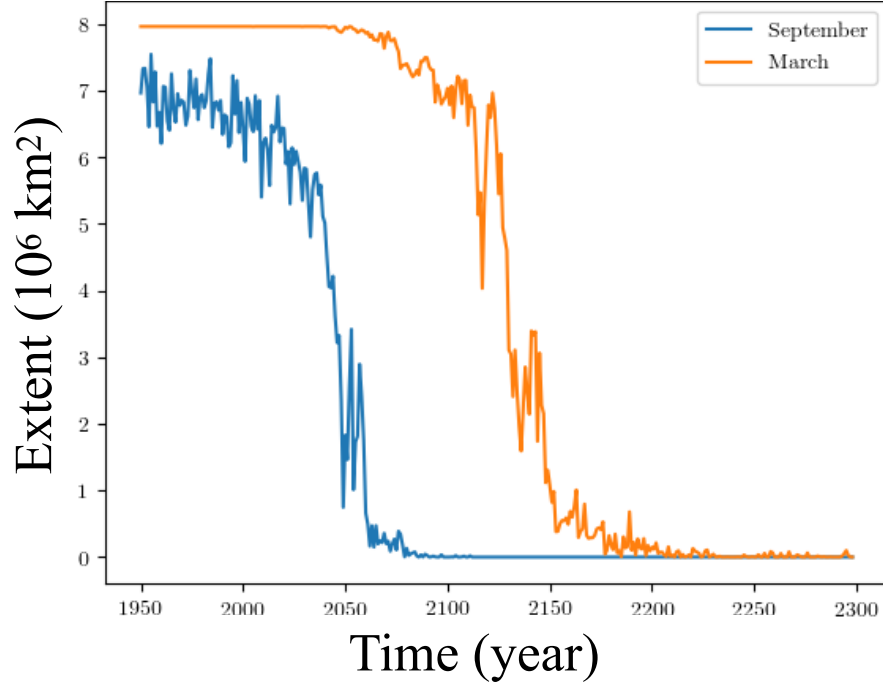


Greenland July 2012





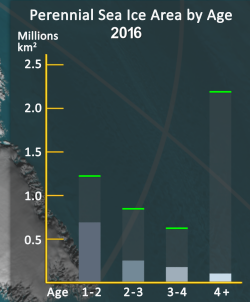
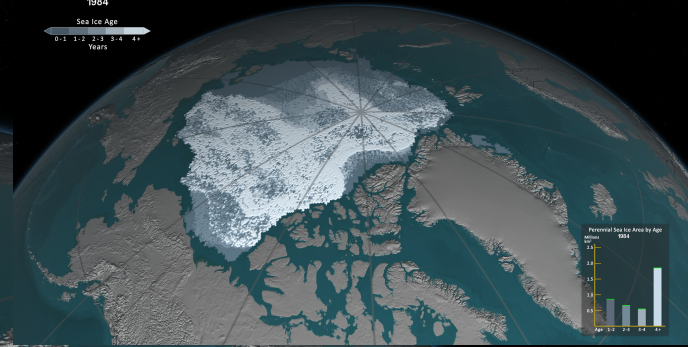
Simulated Future: Arctic sea ice



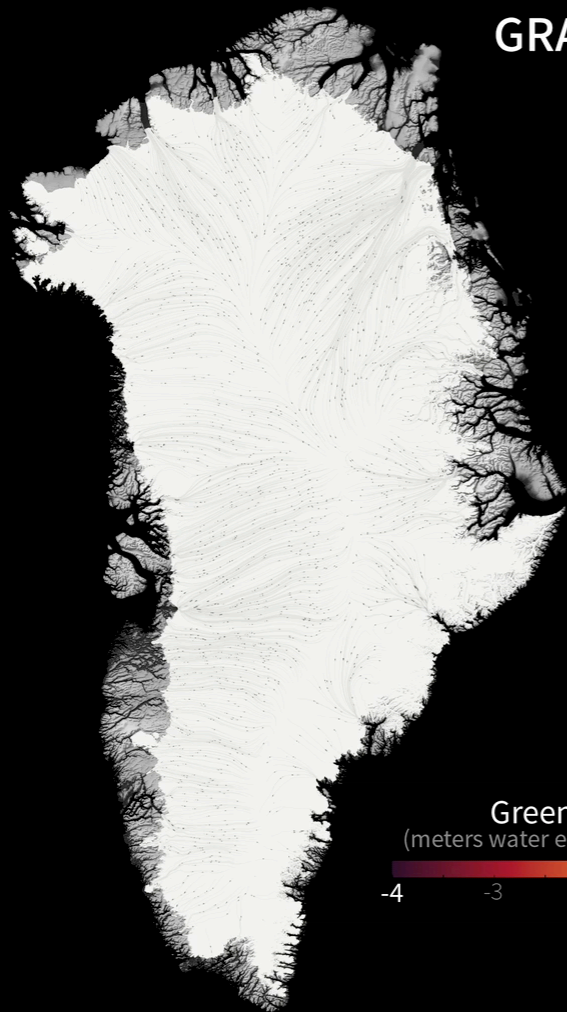
- › “Business as Usual” emission scenario (RCP8.5)
- › Coupled ice-ocean-atmosphere model (including Greenland Ice sheet)
- › Arctic summer sea ice gone by 2050

What is the impact on Greenland?

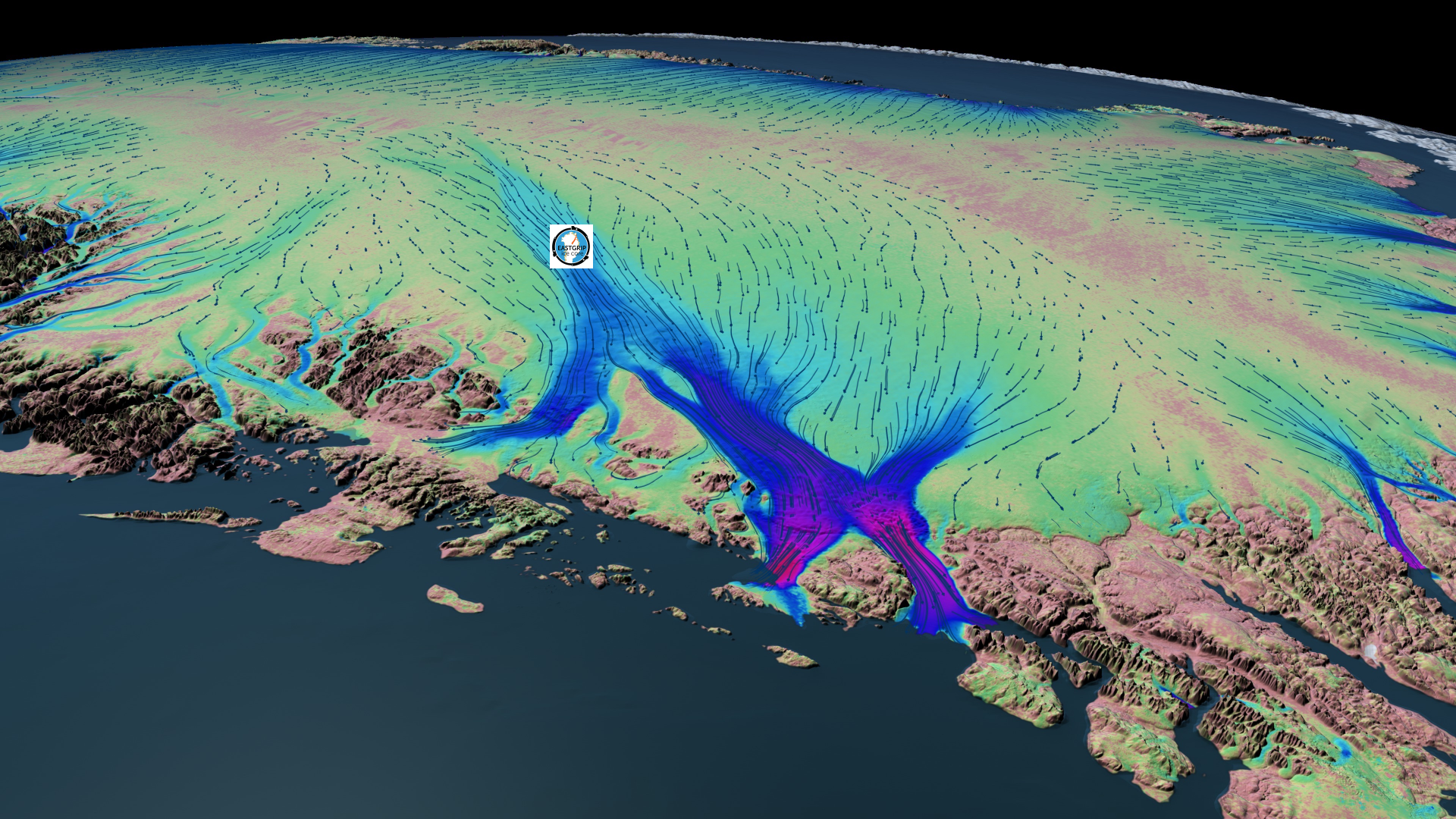
2016



GRACE Observations of Greenland Ice Mass Changes

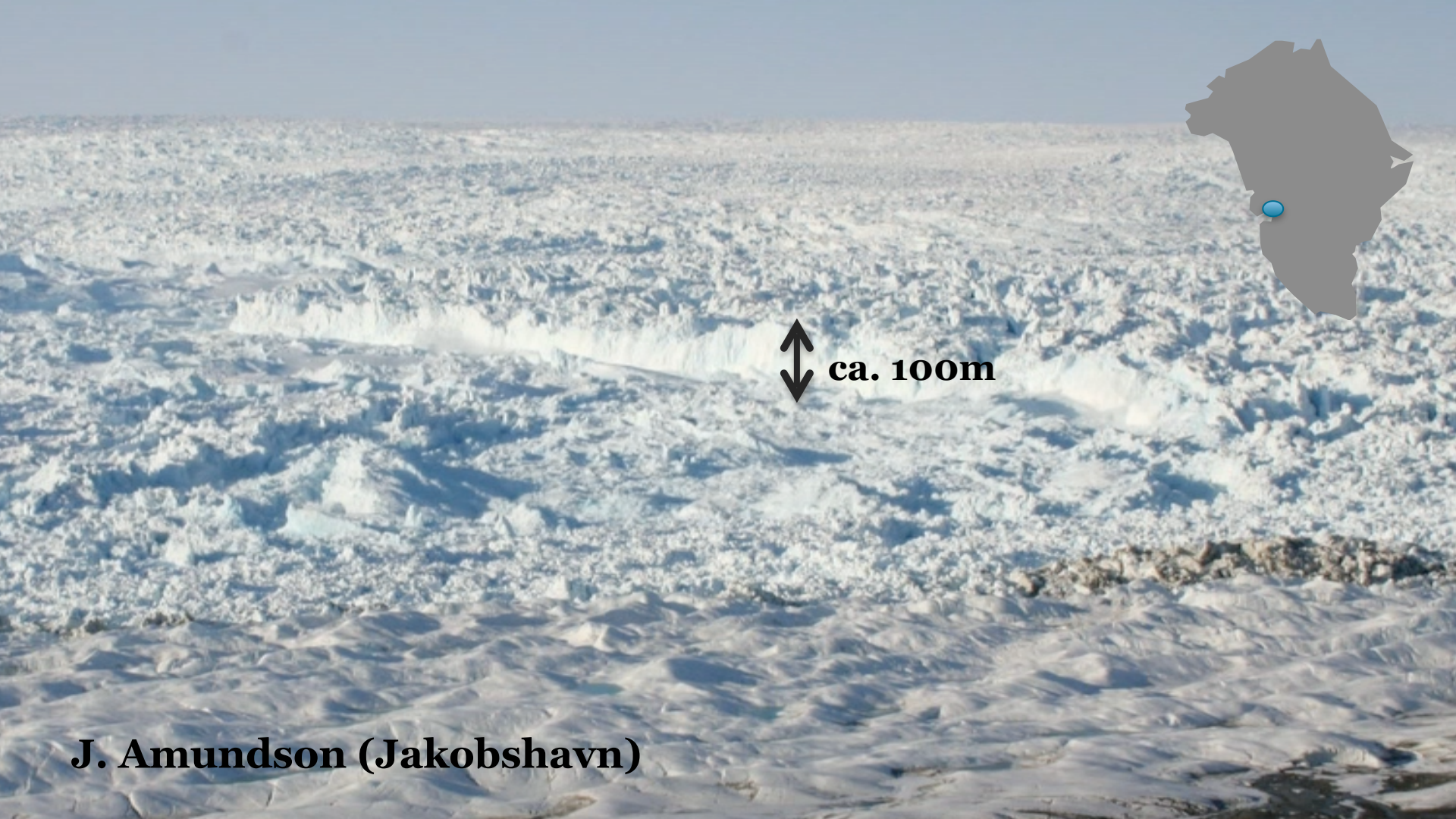












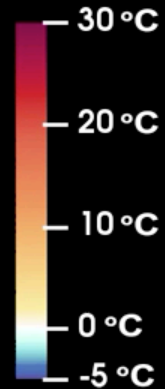
↕ ca. 100m

J. Amundson (Jakobshavn)

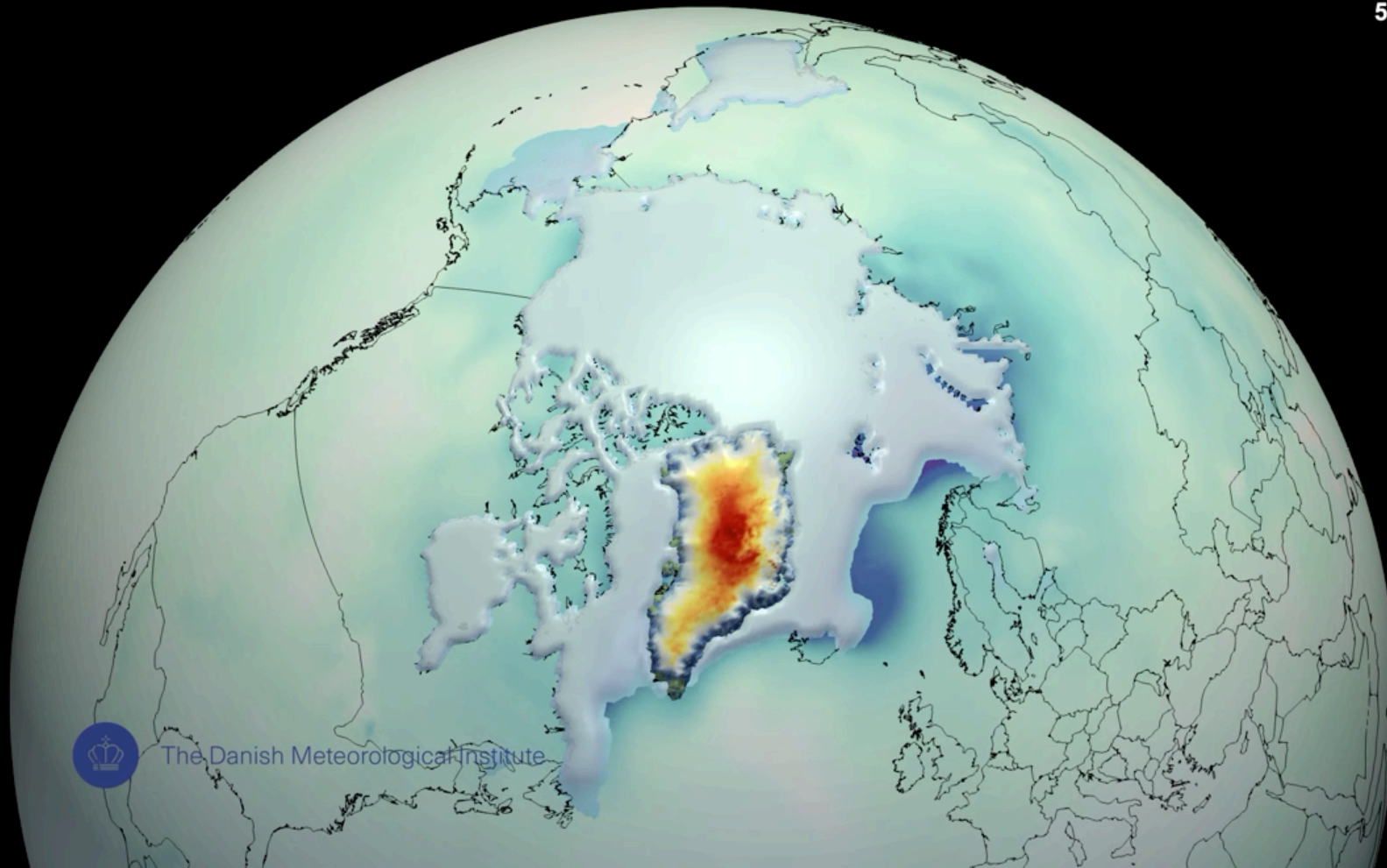
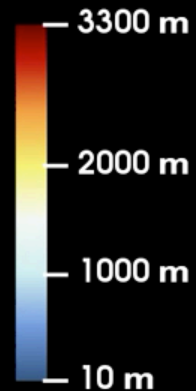


1850 2000 2200 2400 2600 2800 2999

Surface air temperature
5-yearly anomaly



Greenland glacier
ice thickness



The Danish Meteorological Institute



European Research Council

Established by the European Commission

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#ice2ice #eastgrip #turspor