



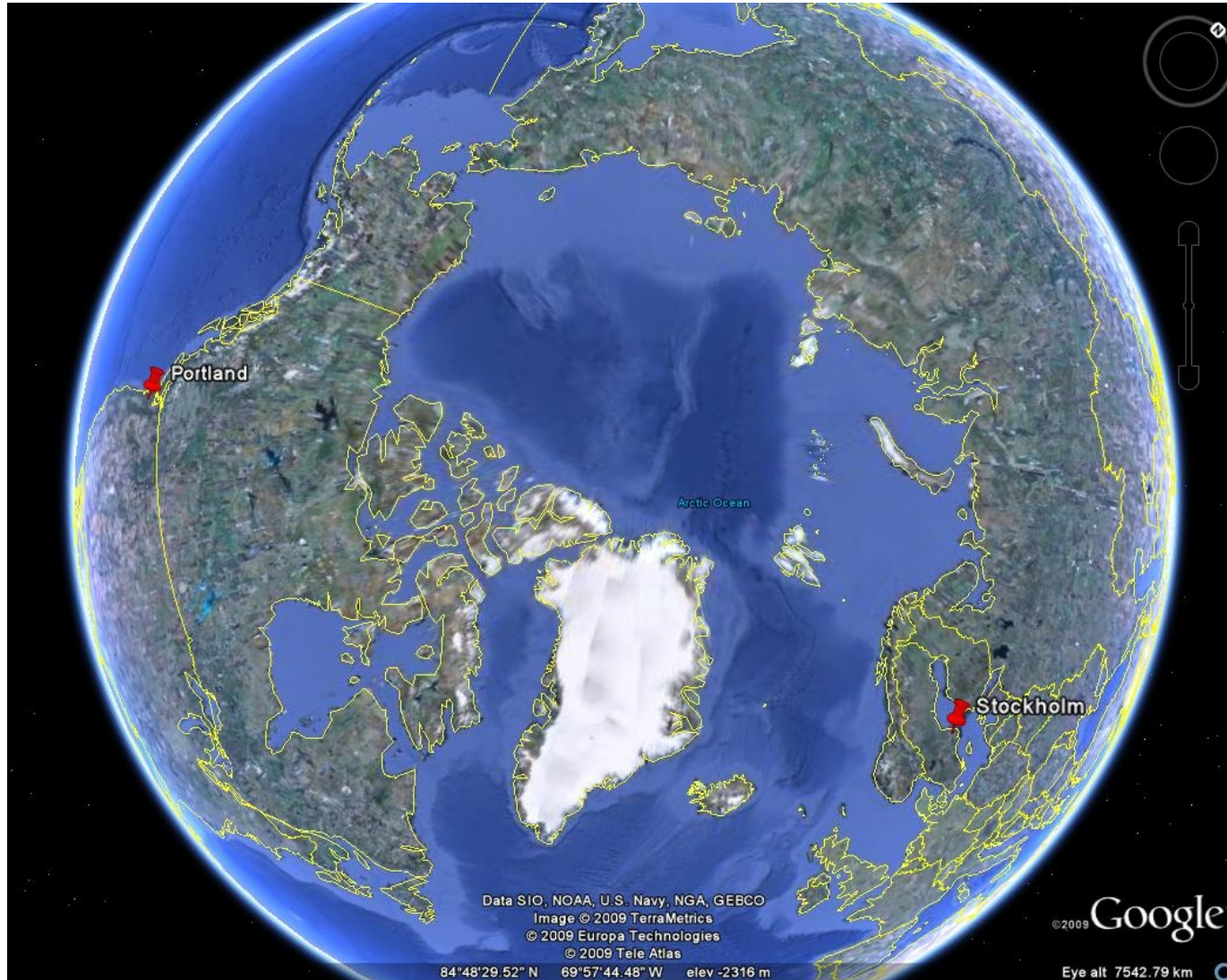
PART 0

1. Approaching Sweden: A view from above

● 2. Swedish Polar Research



Stockholms
universitet



Swedish Polar Research Secretariat / Bert Bolin Center for Climate Research / Stockholm University



area:

450.000 sq km /
174.000 sq mi

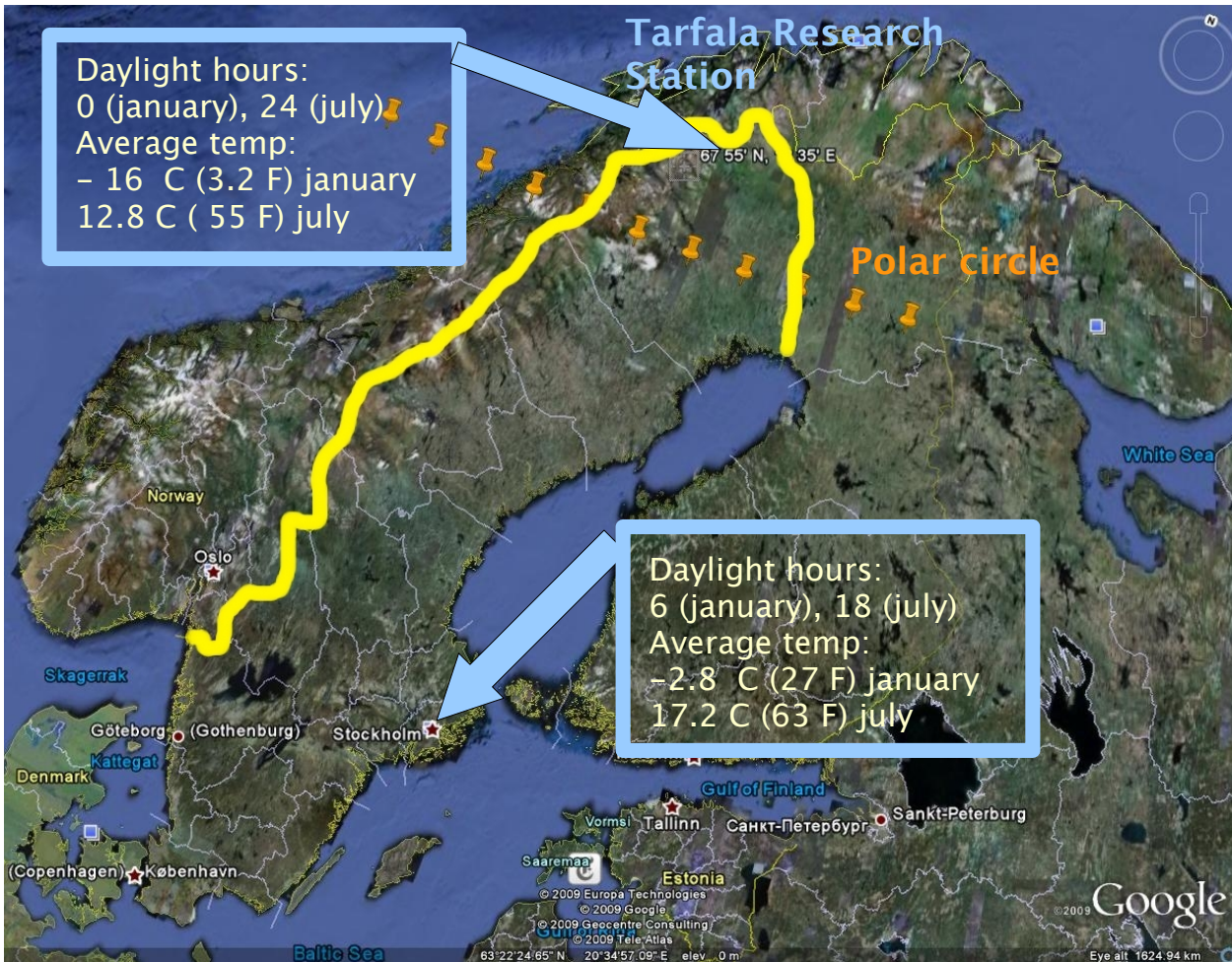
max N-S distance:
1574 km /978 mi

max E-W distance:
499 km / 310 mi

population: 9.3 mio

pop. density:
20(52) people/sq km(mi)

government:
constitutional monarchy/
parliamentary democracy



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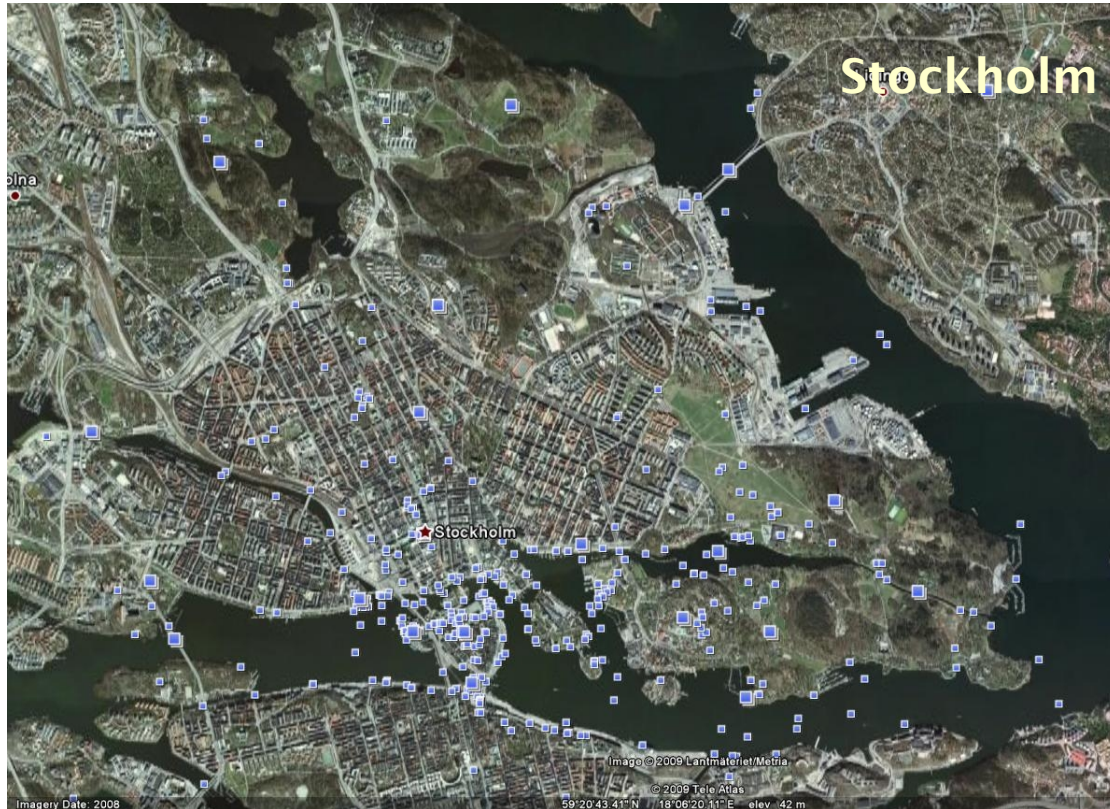
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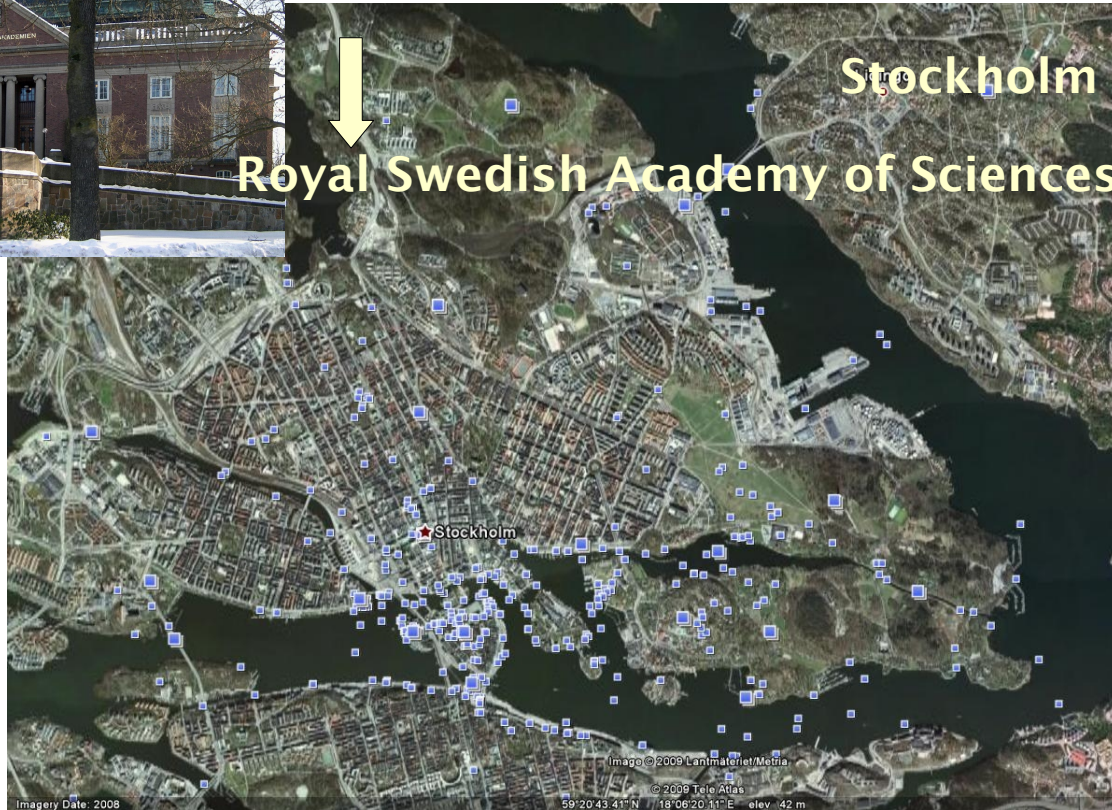
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The home of modern Swedish Polar Research:

Royal Swedish Academy of Sciences

(Kungl. Vetenskapsakademien KVA)

1981: Polar Research Committee is founded at the Royal Swedish Academy of Sciences

1984: Swedish Polar Research Secretariat (Polarforskningssekretariatet) is established as a governmental authority to promote and coordinate Swedish polar research, to follow and plan research and development and to organise and lead research expeditions to the Arctic and Antarctic regions

Swedish polar history

1878–1880: "Vega"

Adolf Erik Nordenskjöld,
North East Passage



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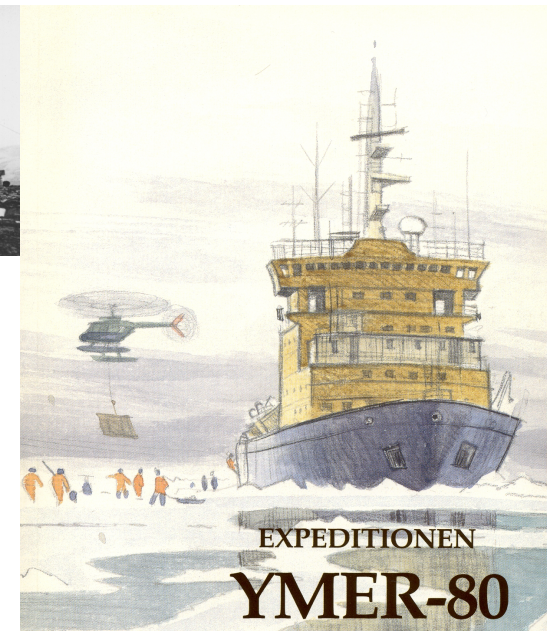
Adolf Erik Nordenskjöld,
Antarctic Peninsula

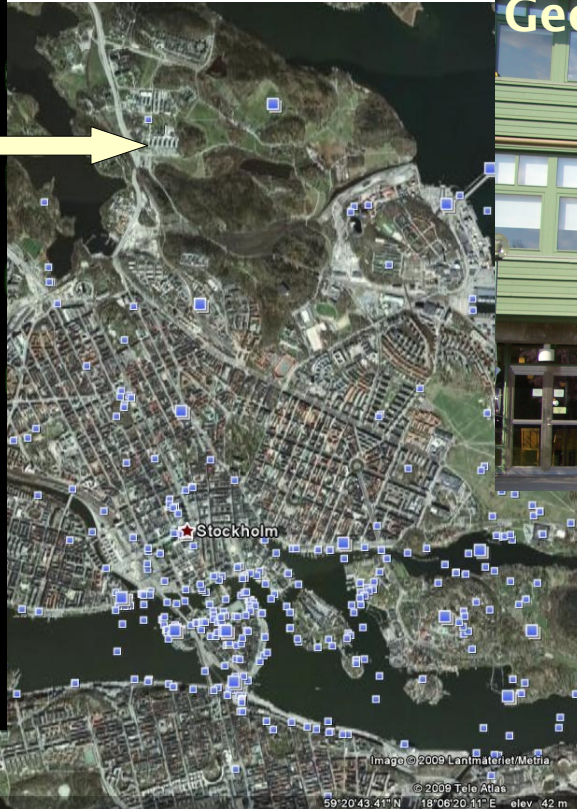


1949–1952: "Maudheim", Queen
Maud Land, Antarctica

1957–1959: "Kinnvika", Svalbard

1980: "Ymer 80" – celebrating the 100th
anniversary of "Vega",
Start of modern Swedish Arctic research
First Swedish Arctic Ocean initiative



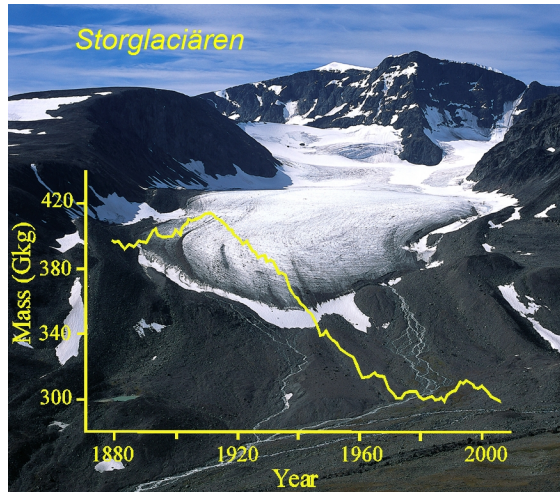
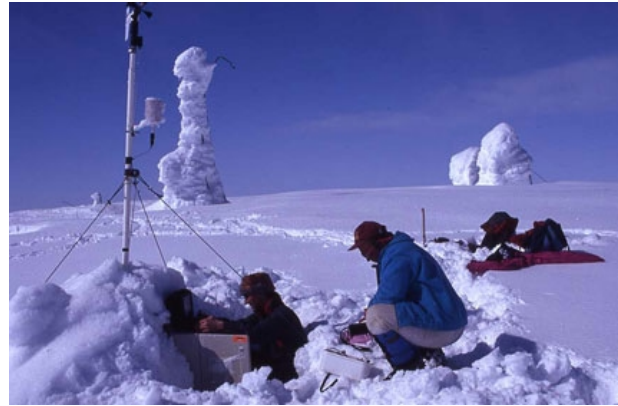


Glaciology

has a long tradition in Sweden:

Storglaciären

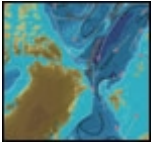
("The large glacier") in the Kebnekaise Mountains is the glacier with the Worlds longest mass balance record



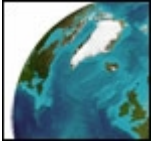
Bert Bolin Center for Climate Research (BBCC) @ SU



Core theme 1: Climate variability



Core theme 2: Atmosphere and ocean circulation



Core theme 3: Land and Ocean spatial reconstructions

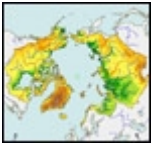
-> *Ice sheet modeling* < -



Core theme 4: Small-scale processes with large scale impacts

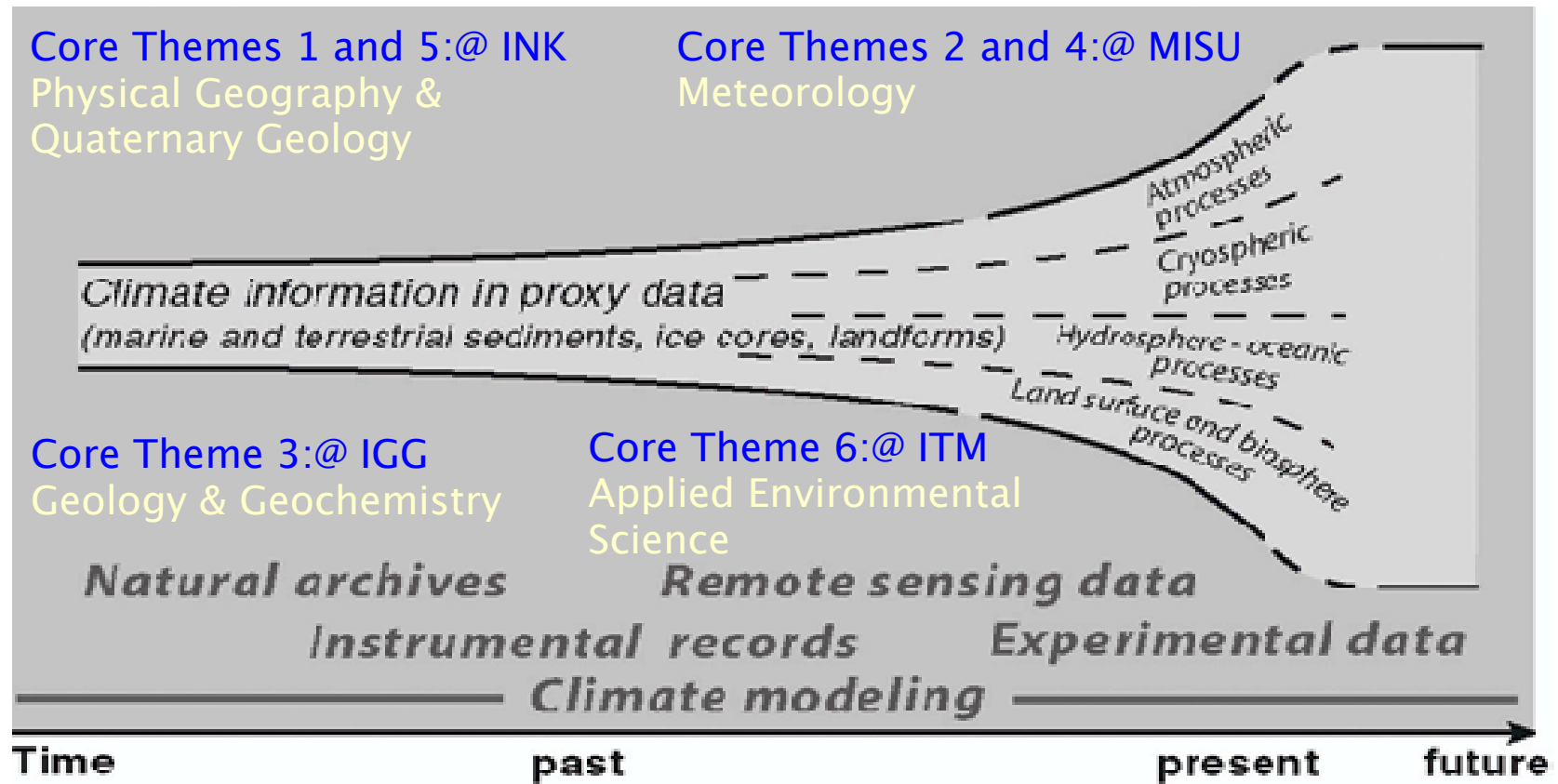


Core theme 5: The water cycle



Core theme 6: Biogeochemical cycles

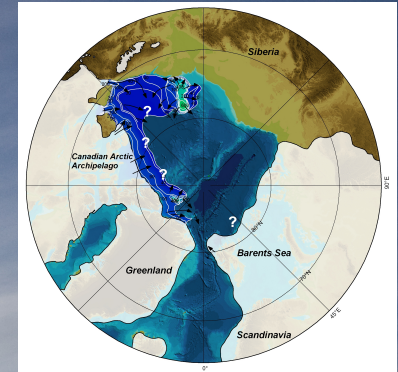
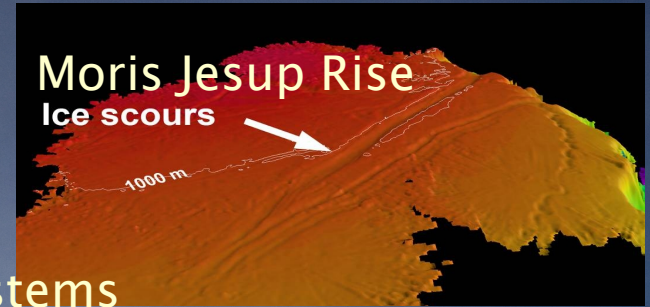
Bert Bolin Center for Climate Research (BBCC)



Foci within numerical Ice sheet modeling:

IMAPS:

Integrative Modeling of Arctic Paleoglacial Systems



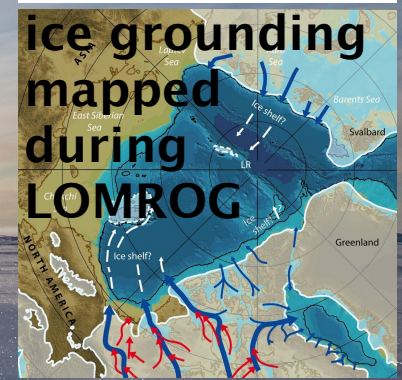
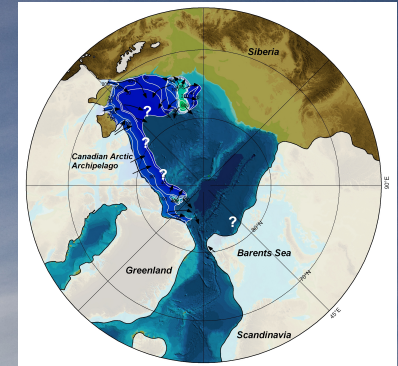
Pictures: T. Mauritzen, M. Jakobsson

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Ice streams in the Cordilleran/Laurentide Ice Sheet

Moris Jesup Rise
Ice scours

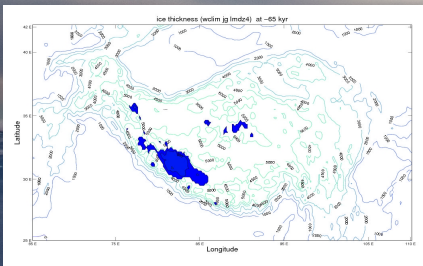
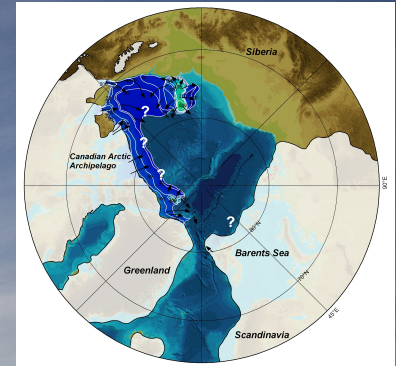
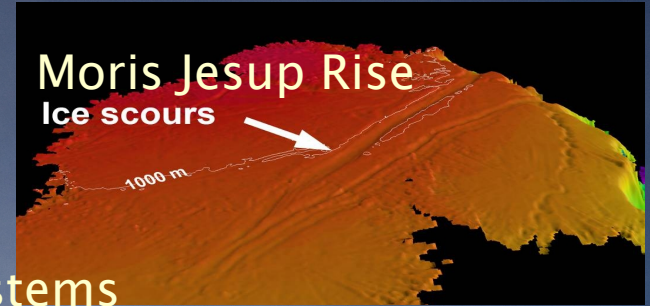


Pictures: T. Mauritzen, M. Jakobsson

Foci within numerical Ice sheet modeling:

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Ice streams in the Cordilleran/Laurentide Ice Sheet
Paleoconfigurations of Tibetan Plateau Glaciations



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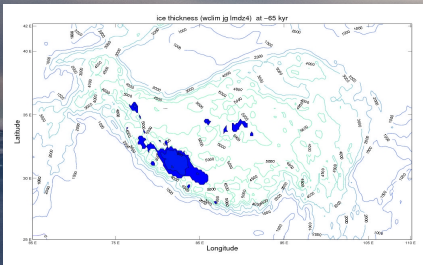
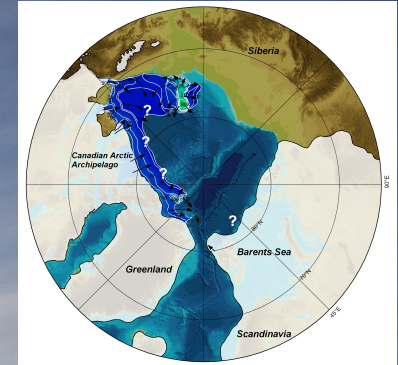
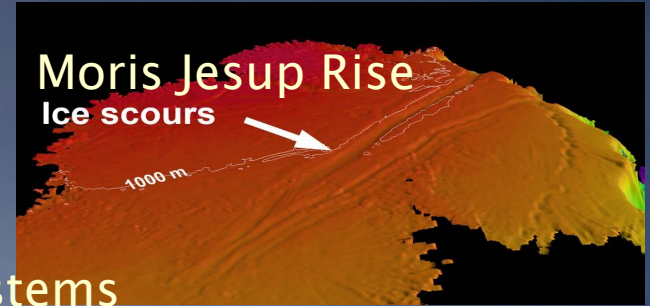
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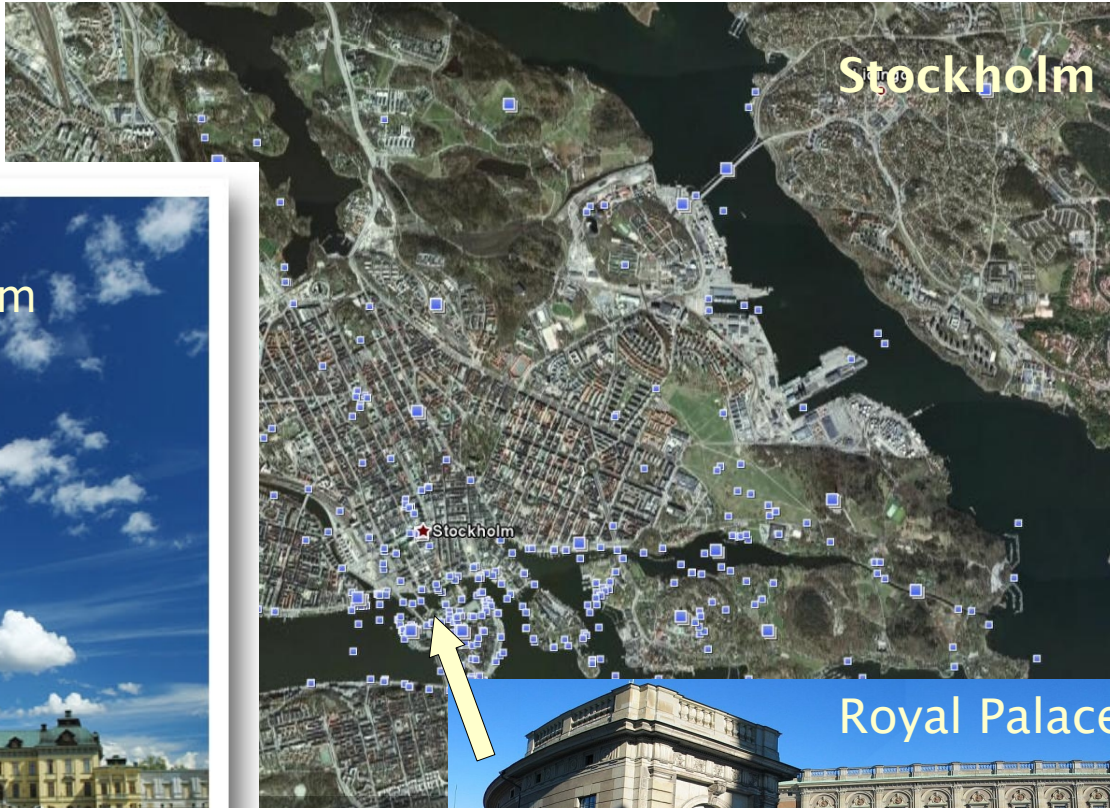
Ice streams in the Cordilleran/Laurentide Ice Sheet

Paleoconfigurations of Tibetan Plateau Glaciations

Ice Sheet – Atmosphere Interactions (Stationary Waves)



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universitet

Pic: T. Mauritzen



2008:
Arctic Ocean north of Svalbard

Crown Princess Victoria (Sweden)
Crown Prince Frederik (Denmark)
Crown Prince Haakon (Norway)

Ice sheet modeling in Sweden focuses currently on

- Arctic Ocean Region
- Paleoconfigurations

to contrast available spatial reconstructions

Activities at the other end of the scale (time-wise & geographically) are planned....

