

Klimamodellering for Arktis - specifikt Grønland

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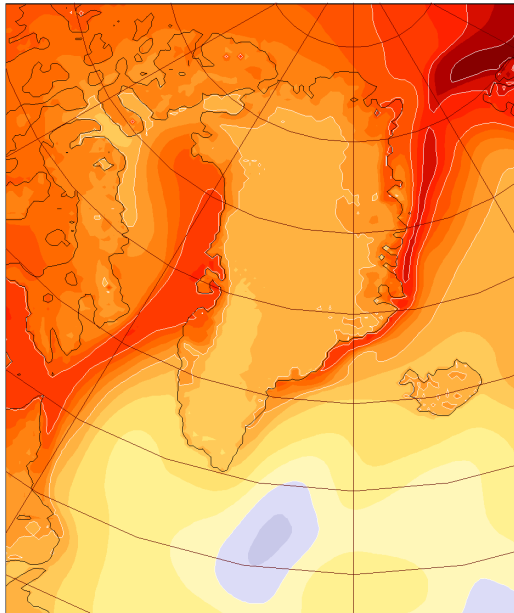


DMU

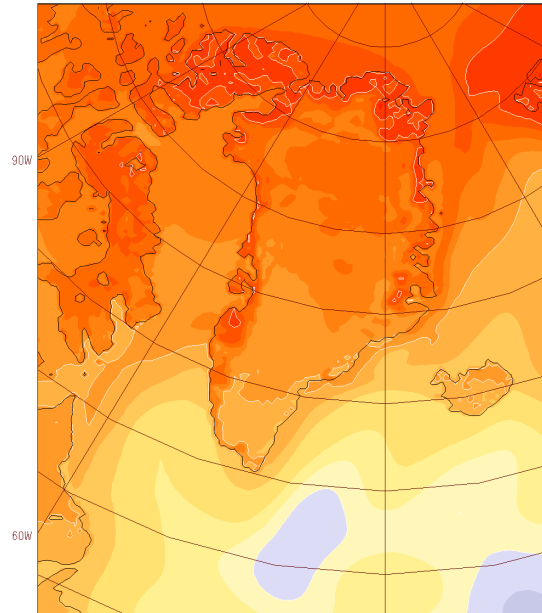


Temperatur (2051-2080) - (1961-1990)

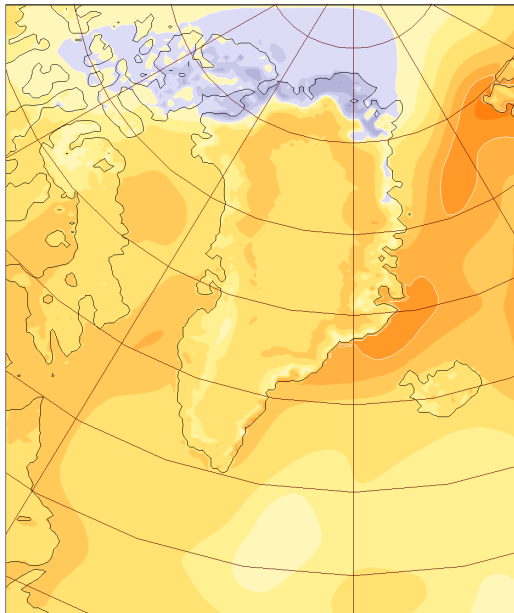
T2m [K] DJF (2051-2080)-(1961-1990)



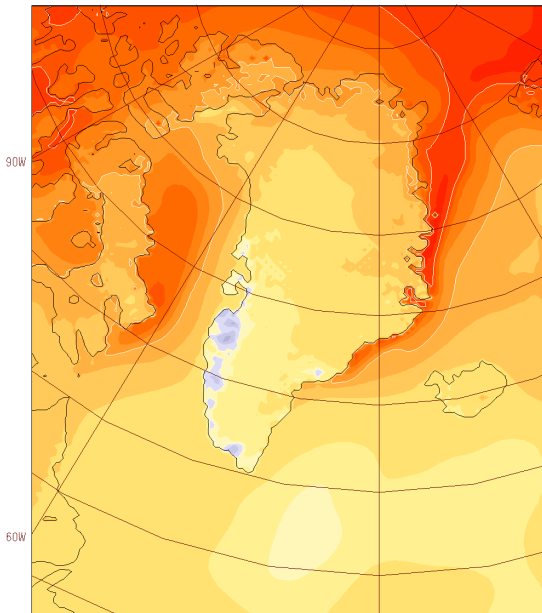
T2m [K] MAM (2051-2080)-(1961-1990)



T2m [K] JJA (2051-2080)-(1961-1990)



T2m [K] SON (2051-2080)-(1961-1990)



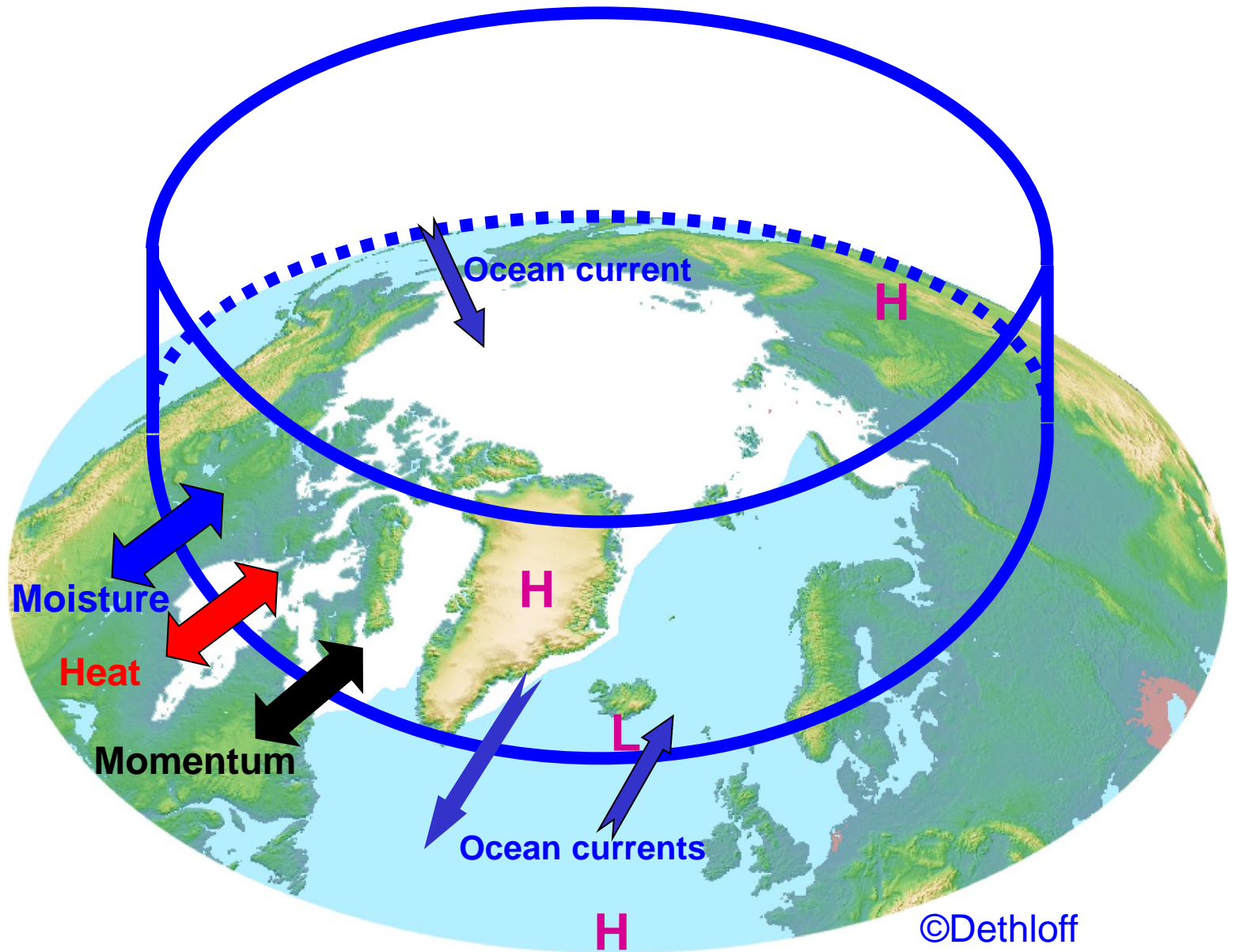
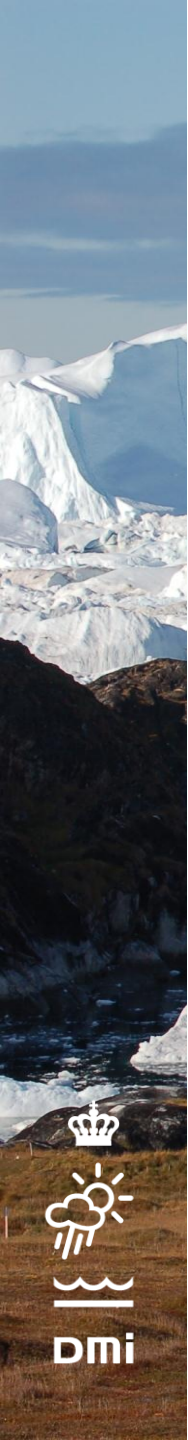
2021-2050

- 3 grader varmere i DJF og 2 grader i JJA
- Lokalt, op til 6 grader (4) langs V (Ø) kysten
- Iskappen: 2 grader

2051-2080

- 7-8 grader varmere i DJF og 3 grader i JJA
- Lokalt, op til 12 grader langs østkysten
- Iskappen: 3-4 grader

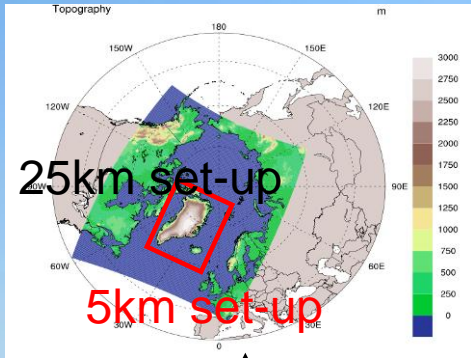
Stendel et al. (2008)



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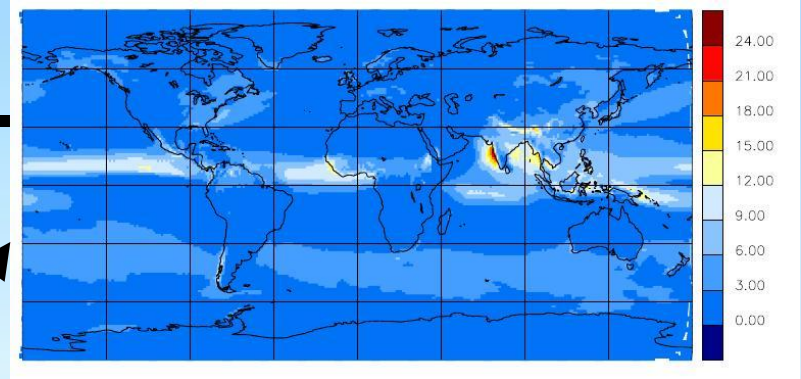


The DMI model system

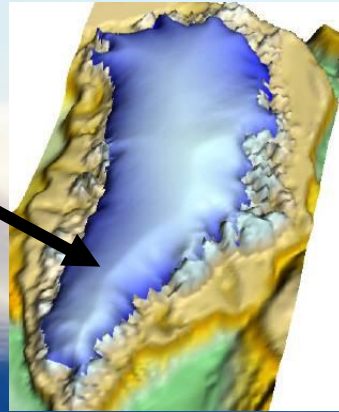
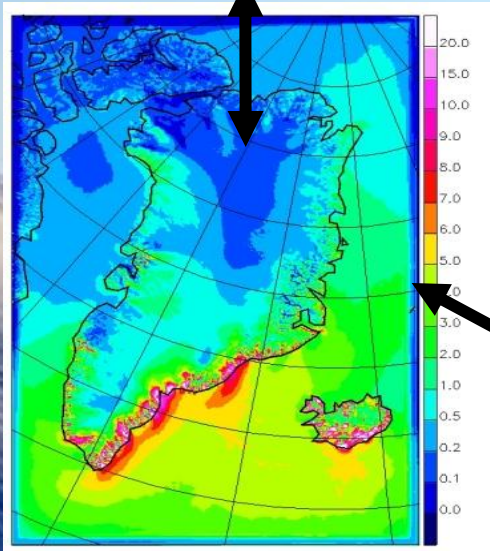


GCM forces RCM

Nordic CoE
DEFROST
SVALI



EC-EARTH
EU-project: COMBINE



HIRHAM5
EU-project Ice2sea

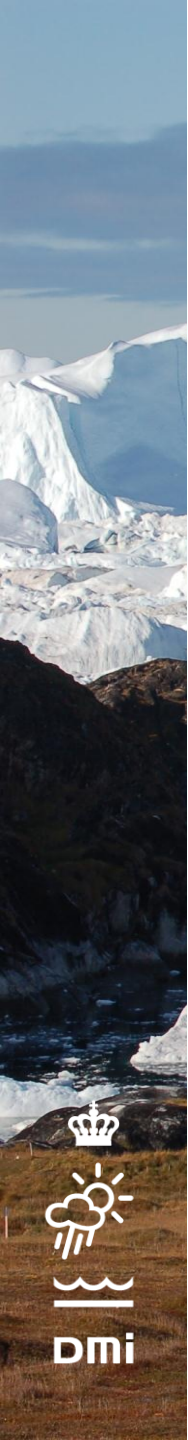
PISM: parallel ice sheet model
University of Alaska Fairbanks

2 GCM boundaries:
HadCM3, ECHAM
2 Scenarios: A1B, E1
200 years

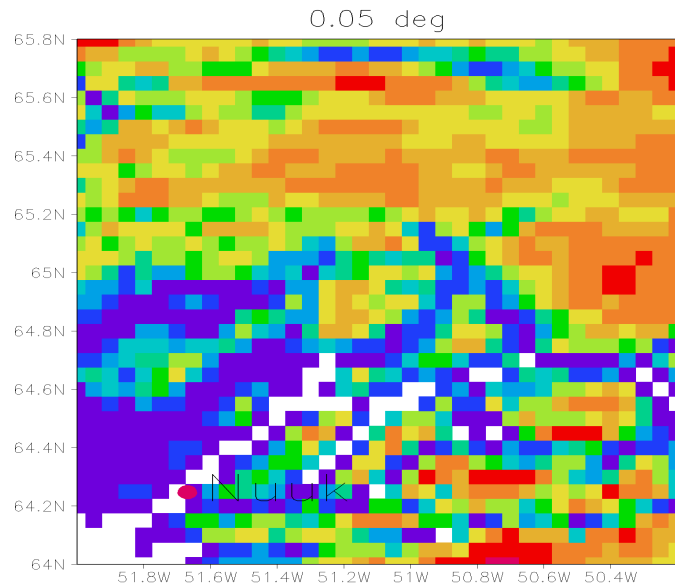
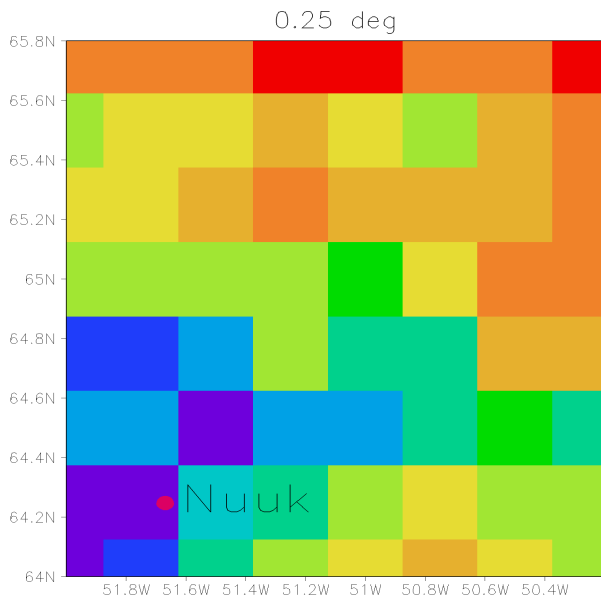
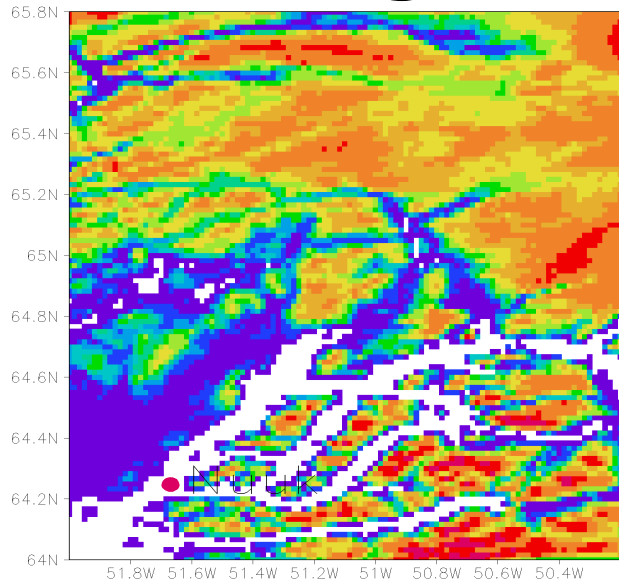
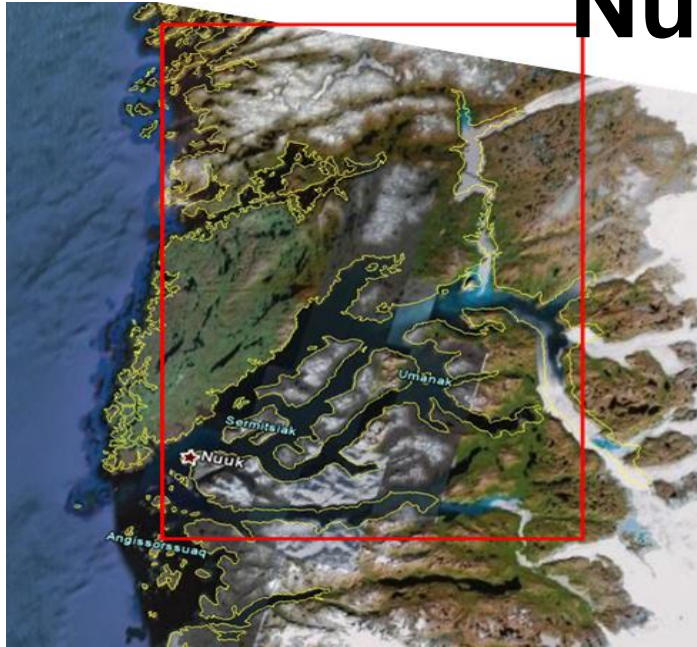


Regional sea level rise



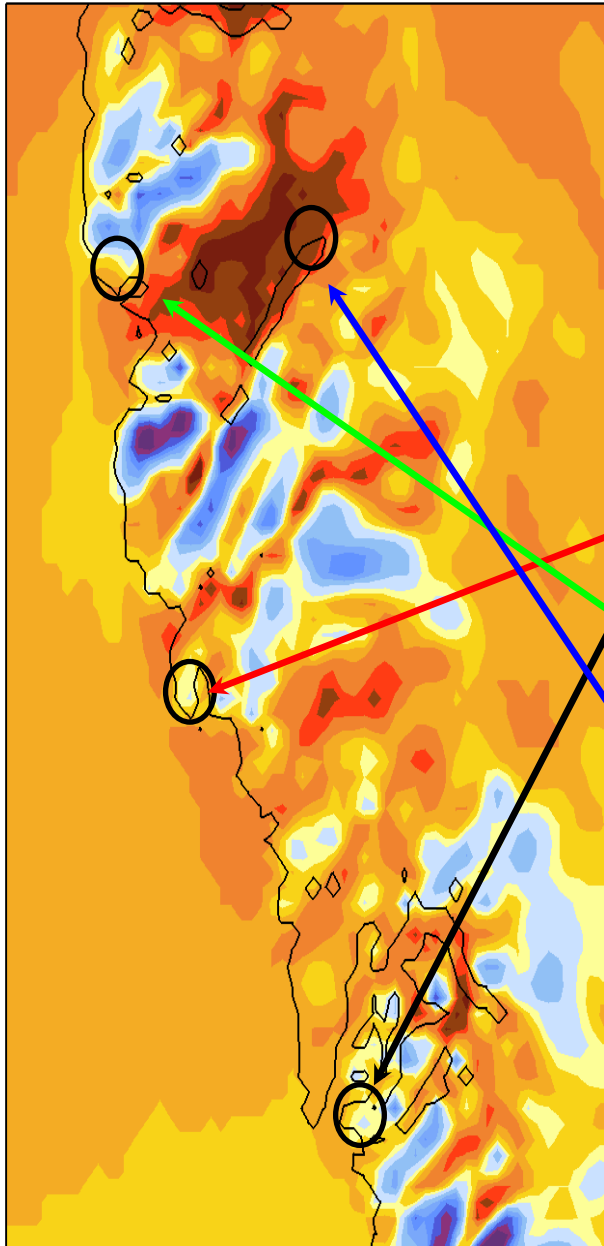


Nuuk setting

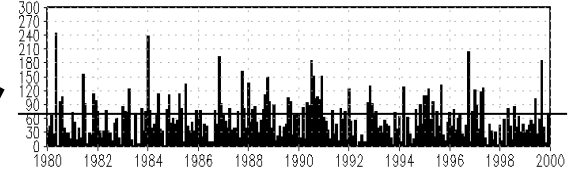


Precipitation verification

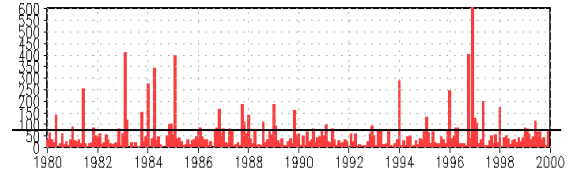
Total annual precipitation [mm] 1980-1989



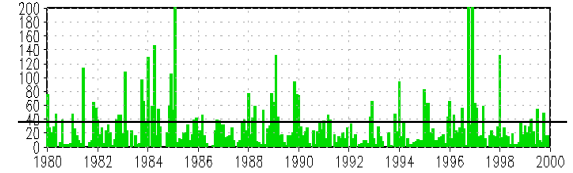
Nuuk monthly RR 1980-1999



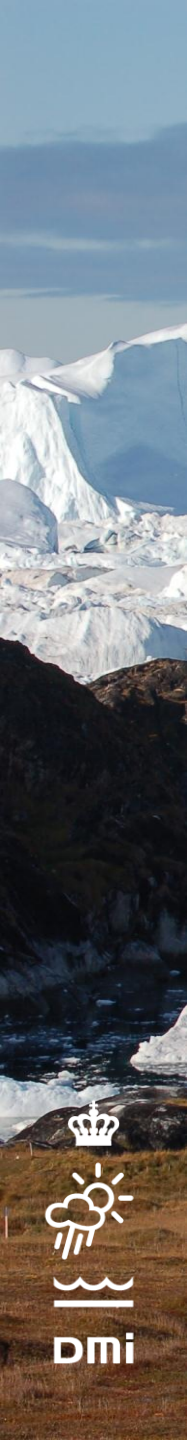
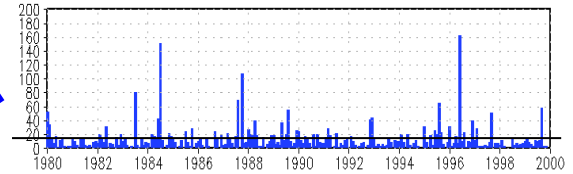
Maniitsoq monthly RR 1980-1999



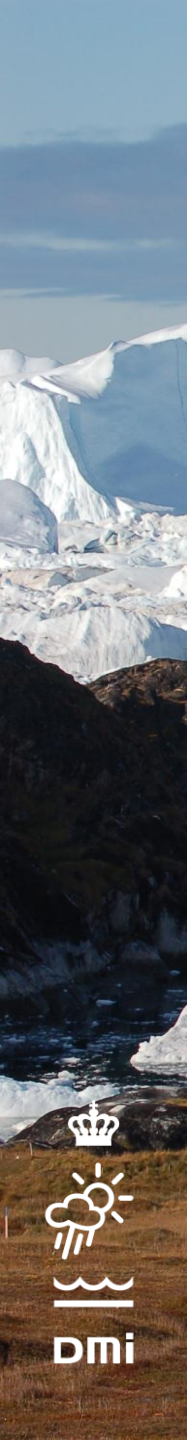
Sisimiut monthly RR 1980-1999



Kangerlussuaq monthly RR 1980-1999

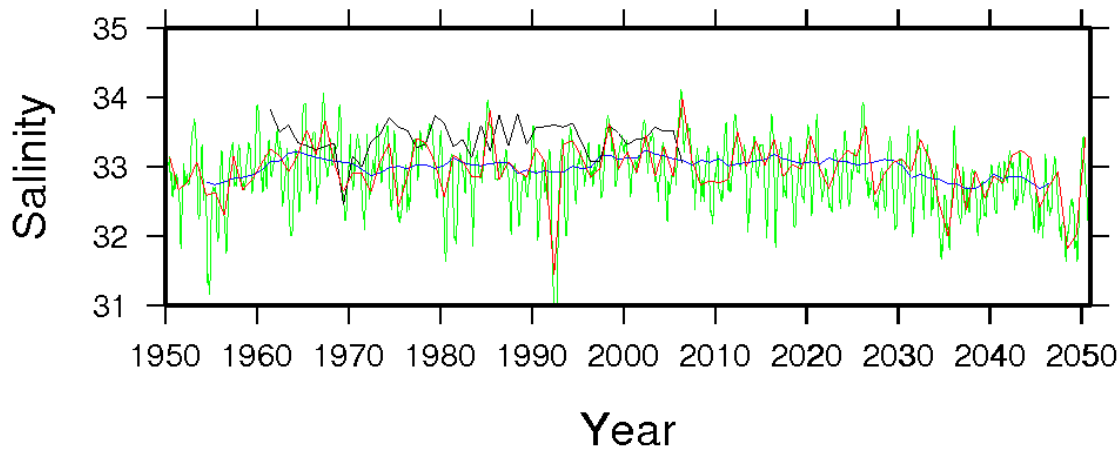
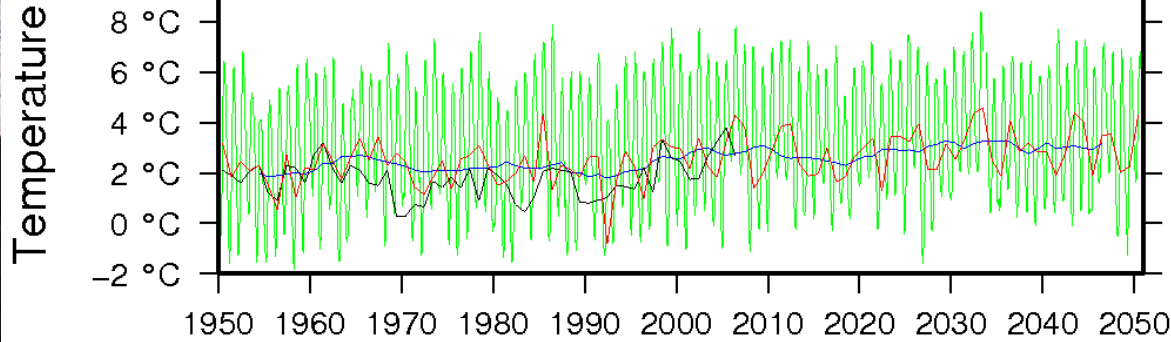
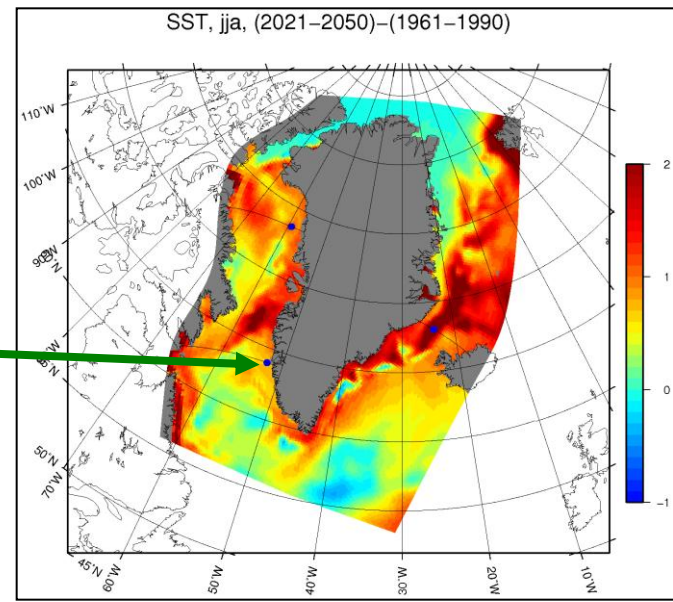


Ocean



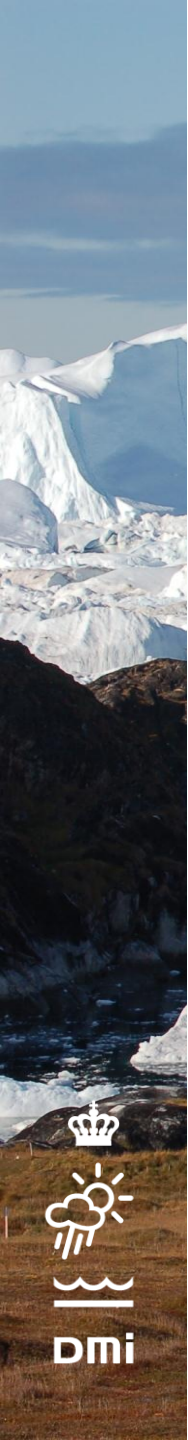
The ocean

Fylla Bank, station 2, 0–40m

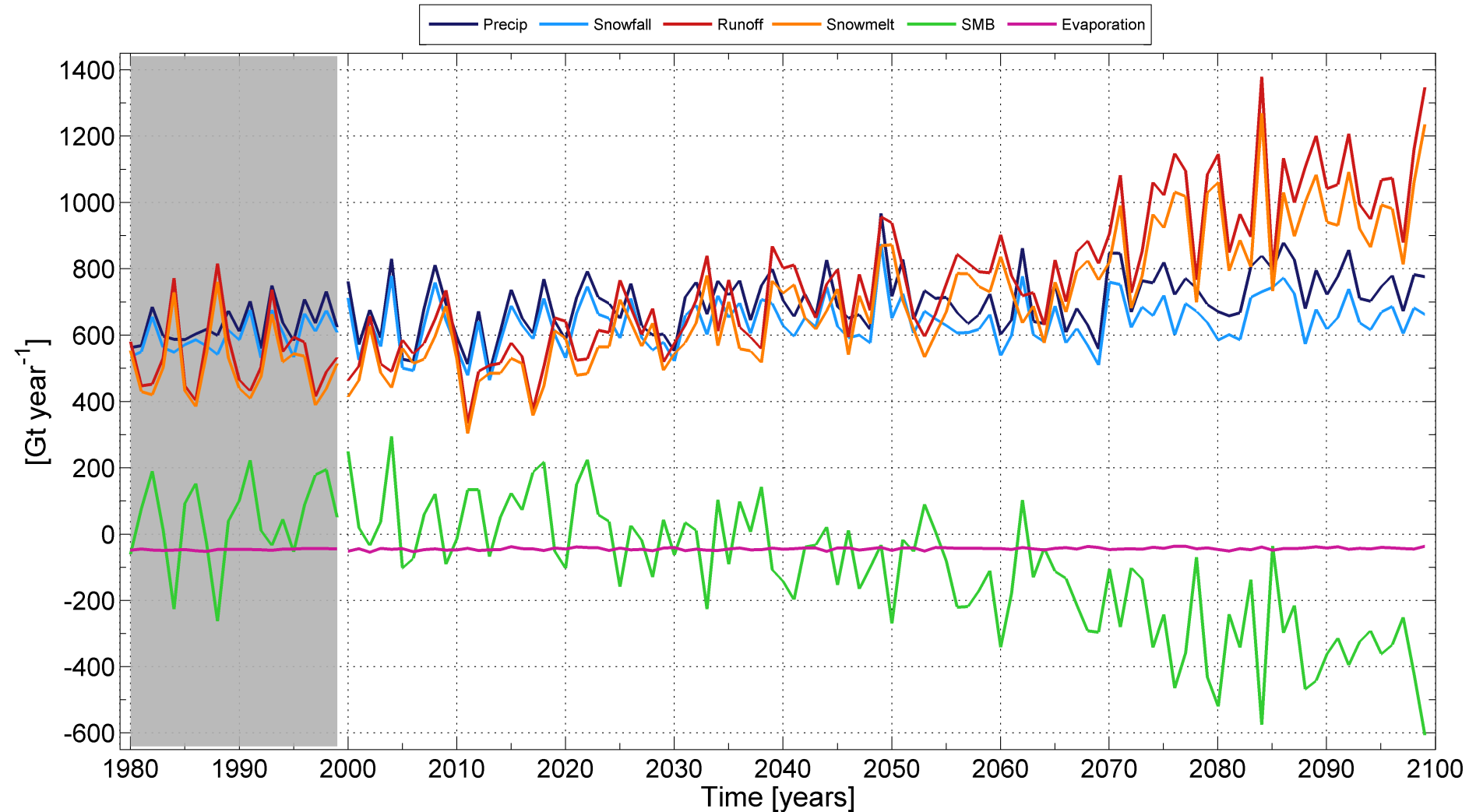
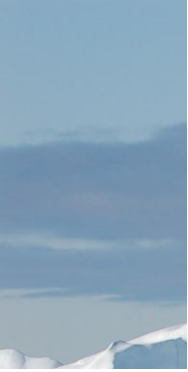


- Black: observed
- Green: all months
- Red: June
- Blue: June (averaged)

Ice Sheet



120 years run with ECHAM5 boundaries

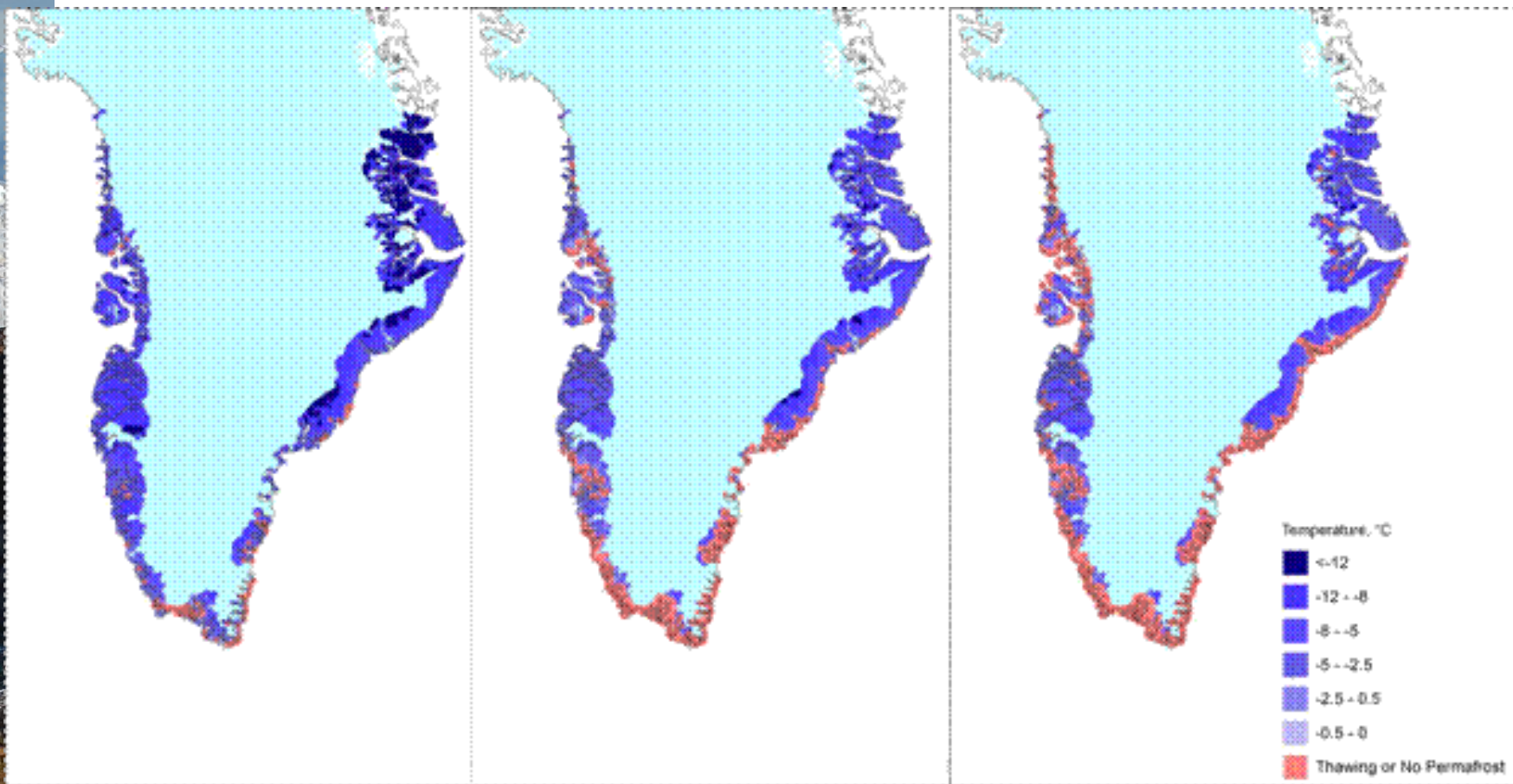


Permafrost

Asiaq; ARTEK; University Alaska, Fairbanks; DMI



Annual mean temperature at 1m depth with GIPL



1980-1999

2046-2065

2080-2099



Stendel et al. 2012





En fremtid med klimaeffekter