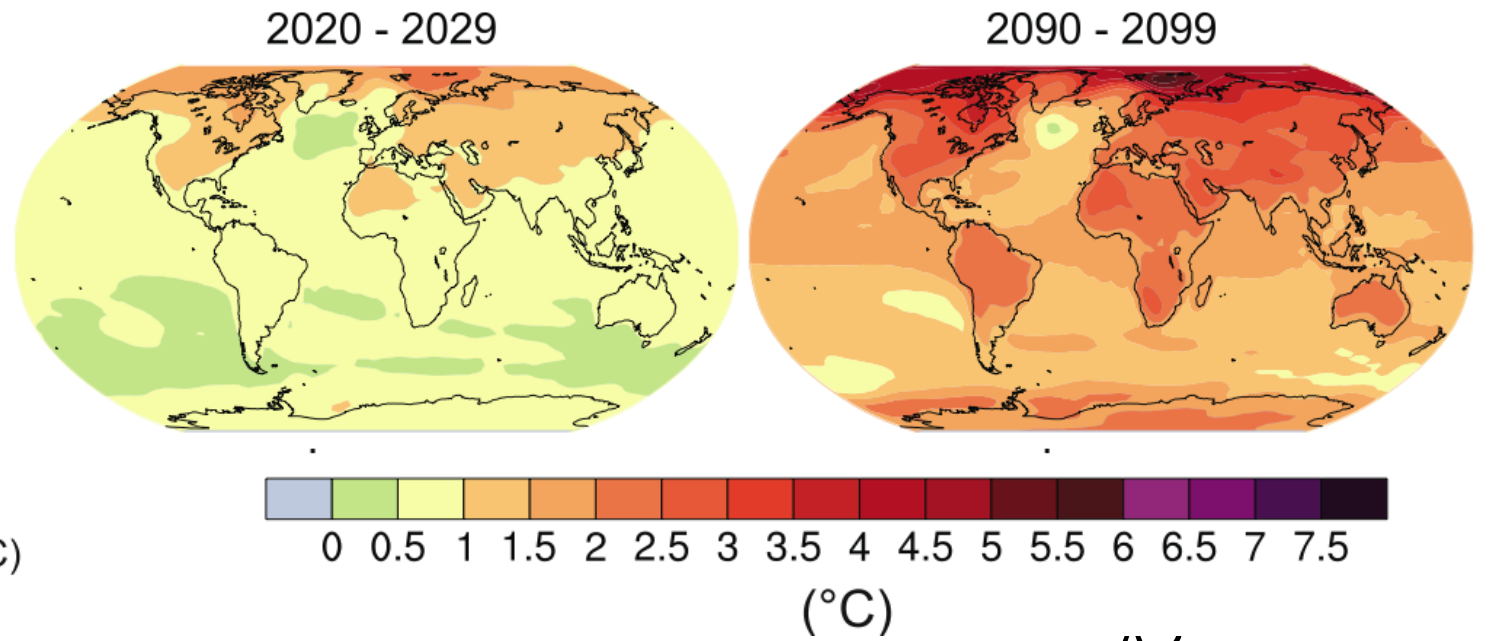
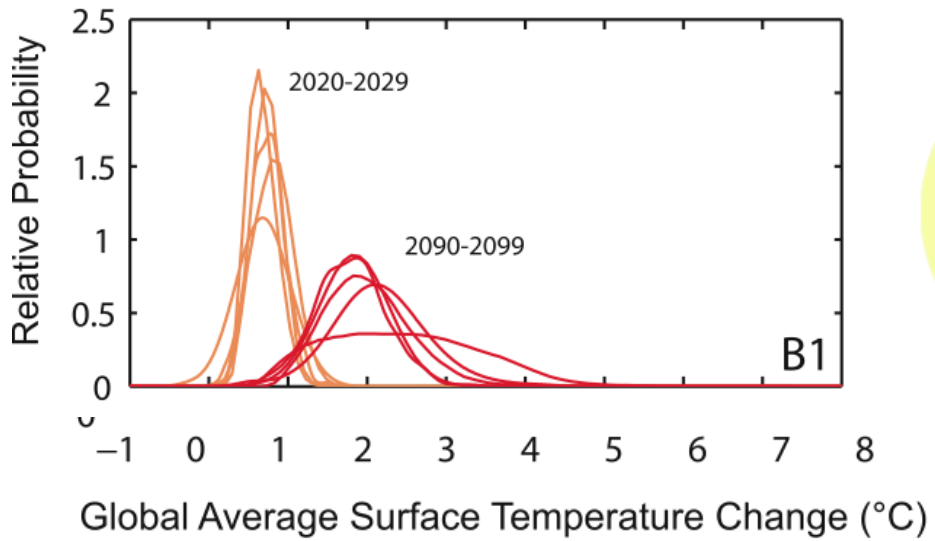


Veður, gróður og veðurfar í fortíð, nútíð og framtíð

Gróður og hitafarsbreytingar
Gróður og staðbundnir vindar
Gróður og stormatíðni
Hita- og úrkomubreytingar

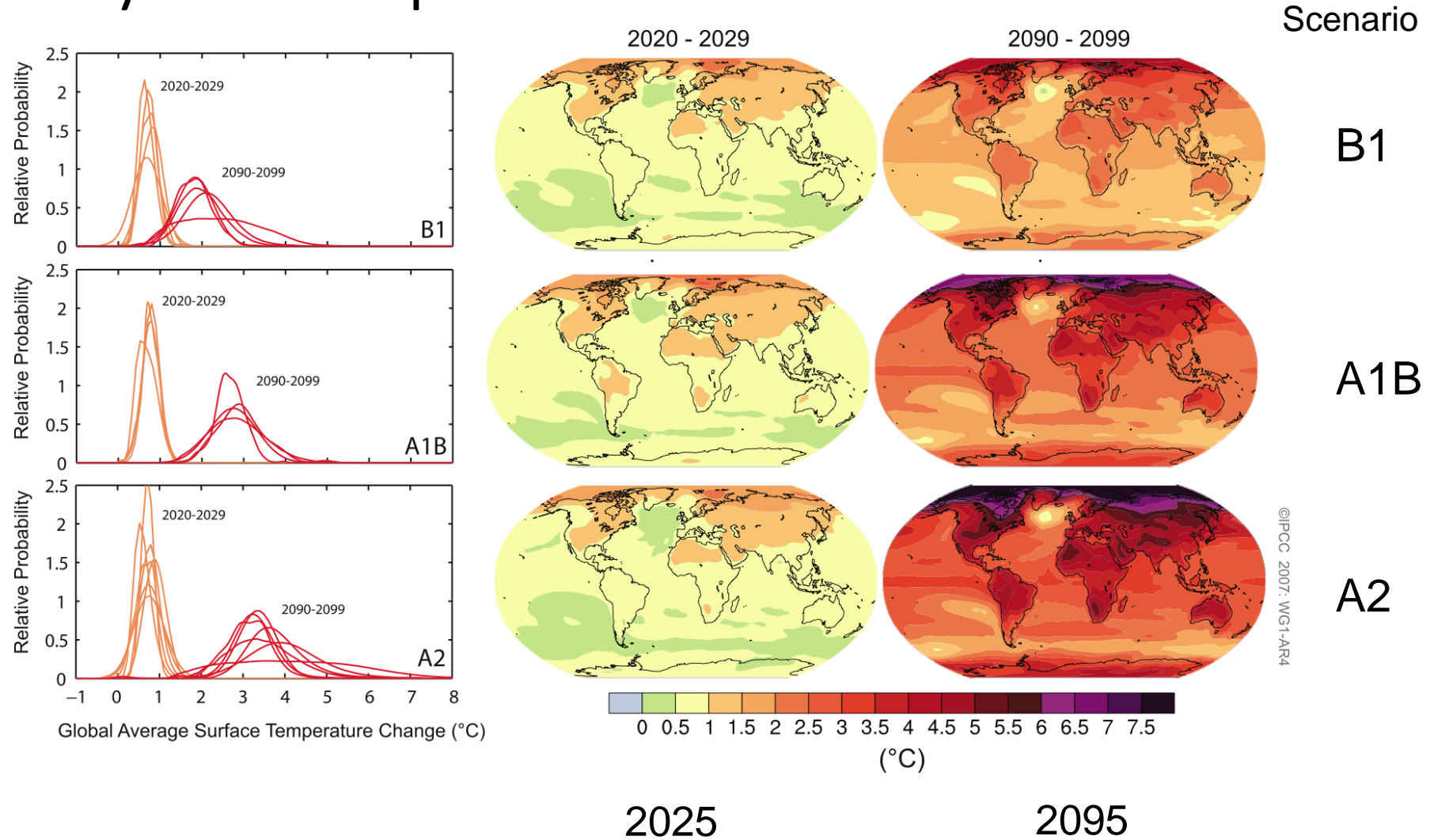
Hlýnunarspá á 21. öld

Sviðsmynd B1

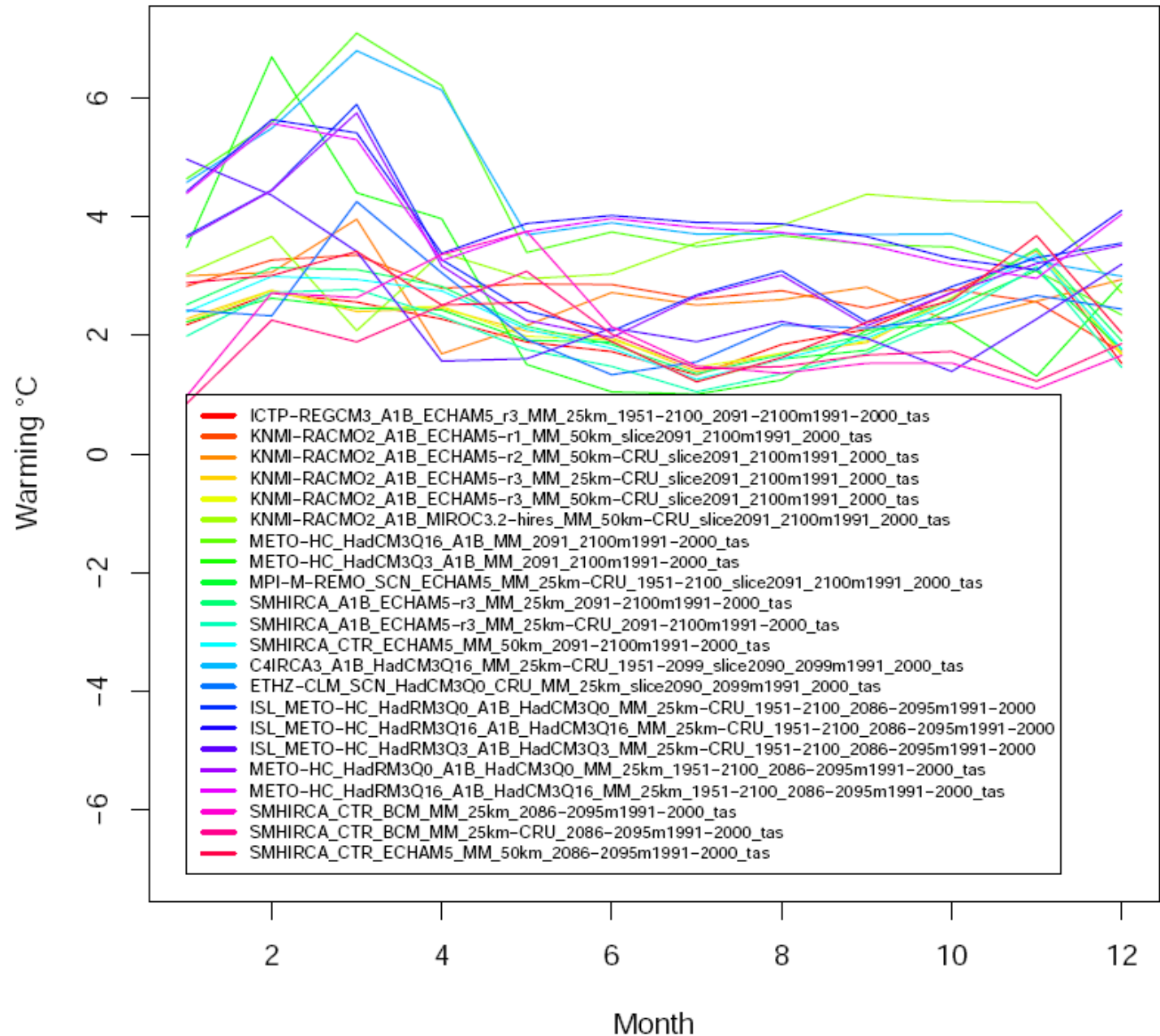


AZ

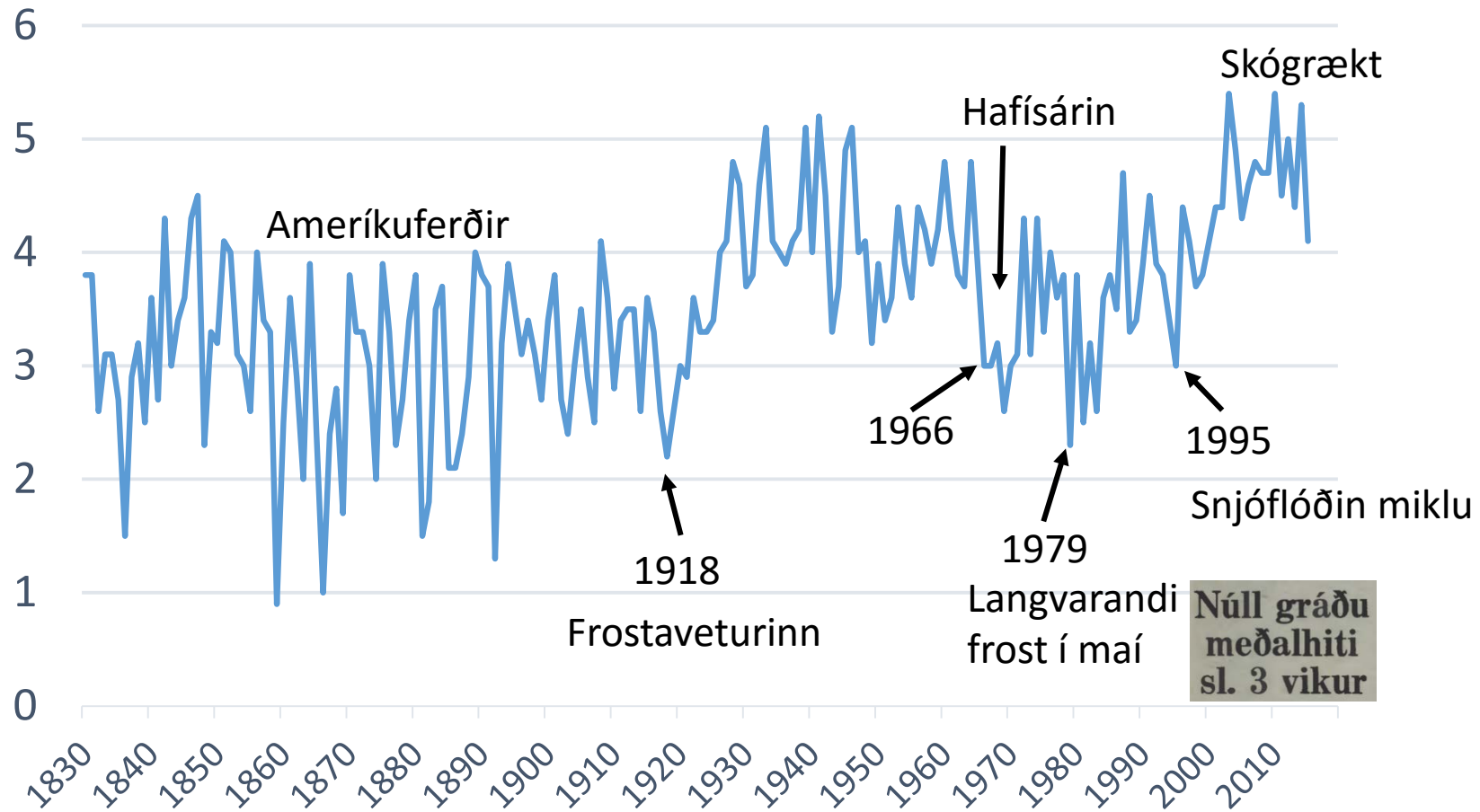
Hlýnunarspá á 21. öld

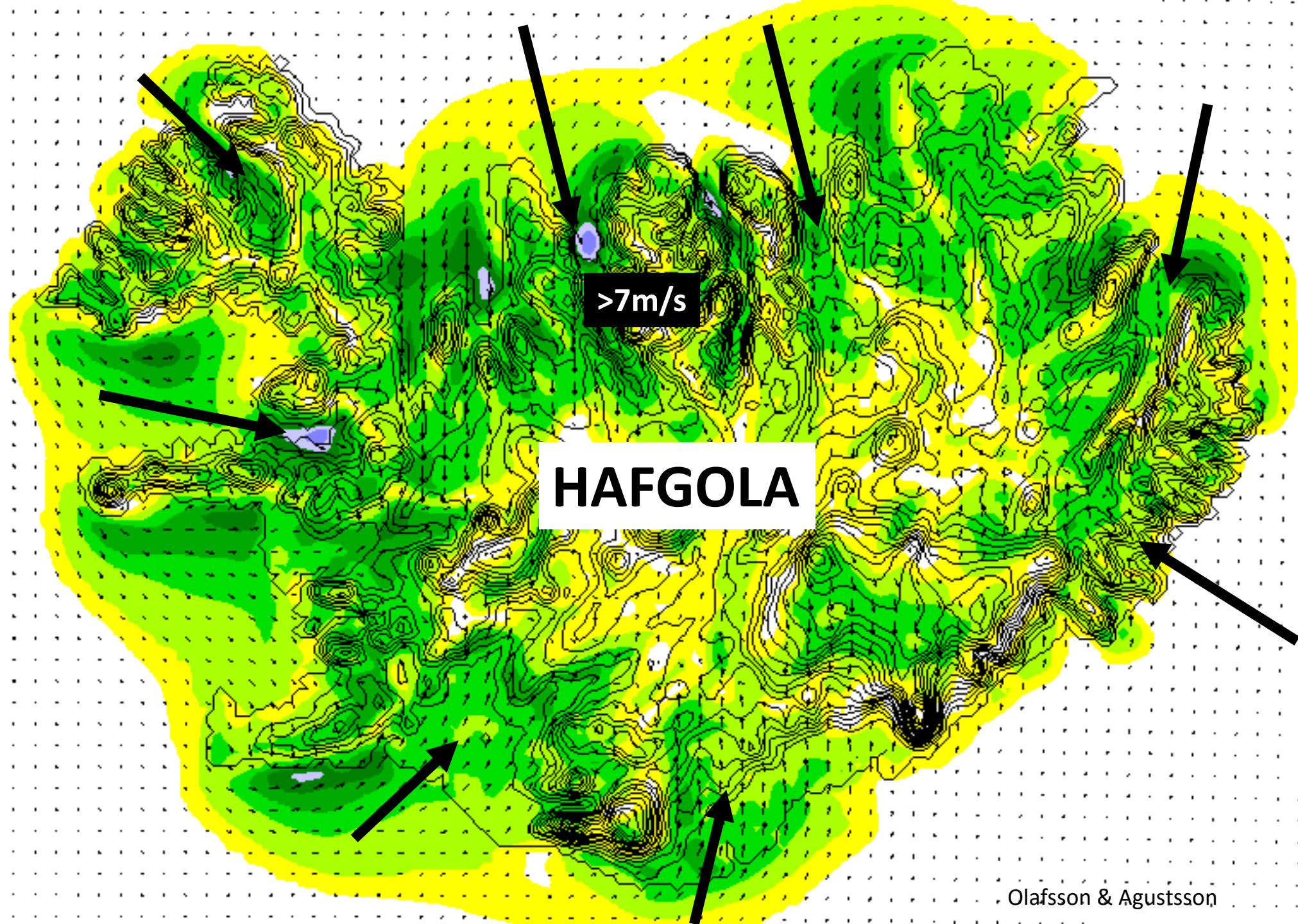


Spár fyrir hitafarsbreytingu á Íslandi á 21. öld (°C)



Meðalárshiti í Stykkishólmi (°C)



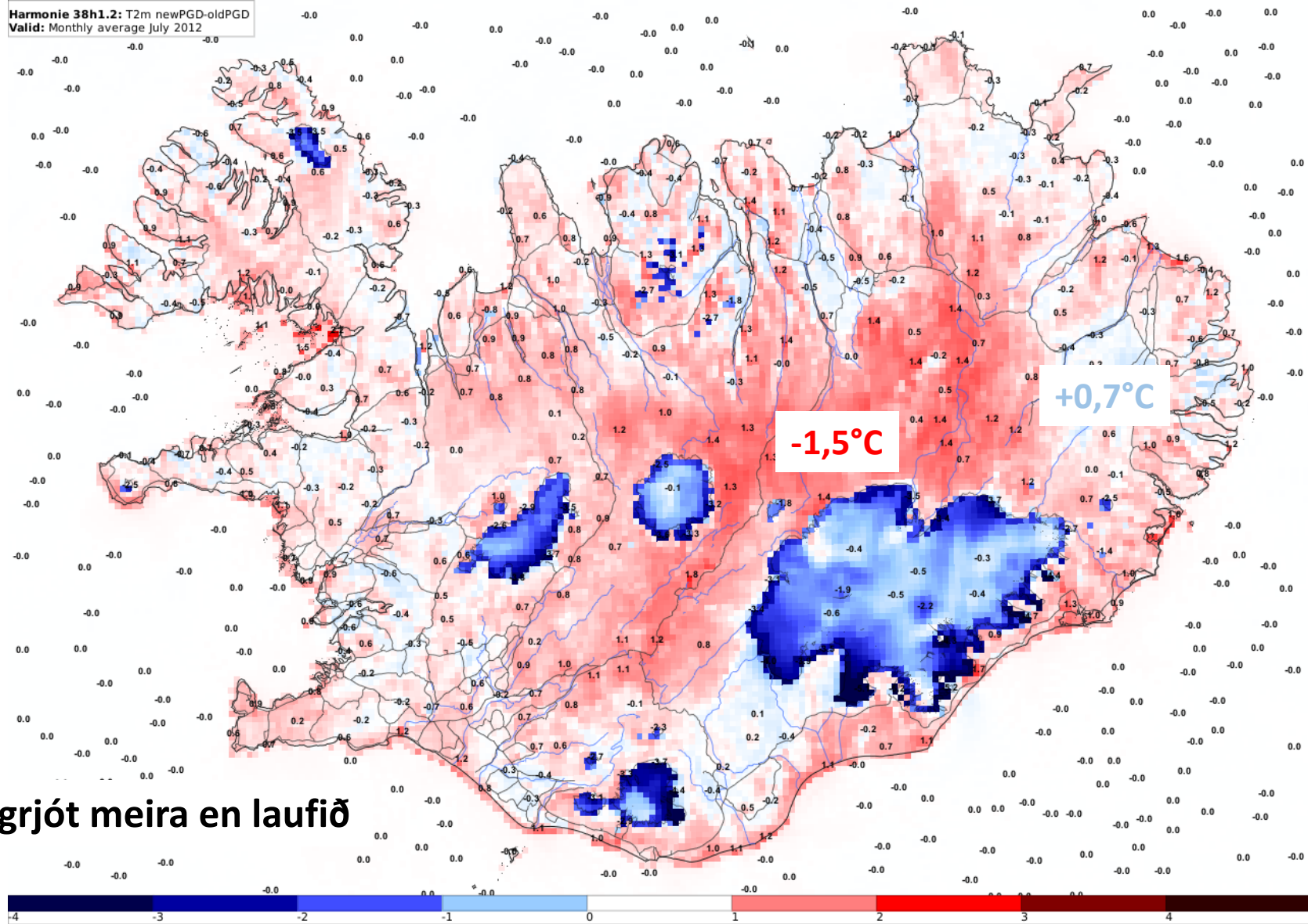


$>7\text{m/s}$

HAFGOLA

T(2m) við núverandi yfirborð að frádregnum T(2m) yfir gróskumiklu yfirborði

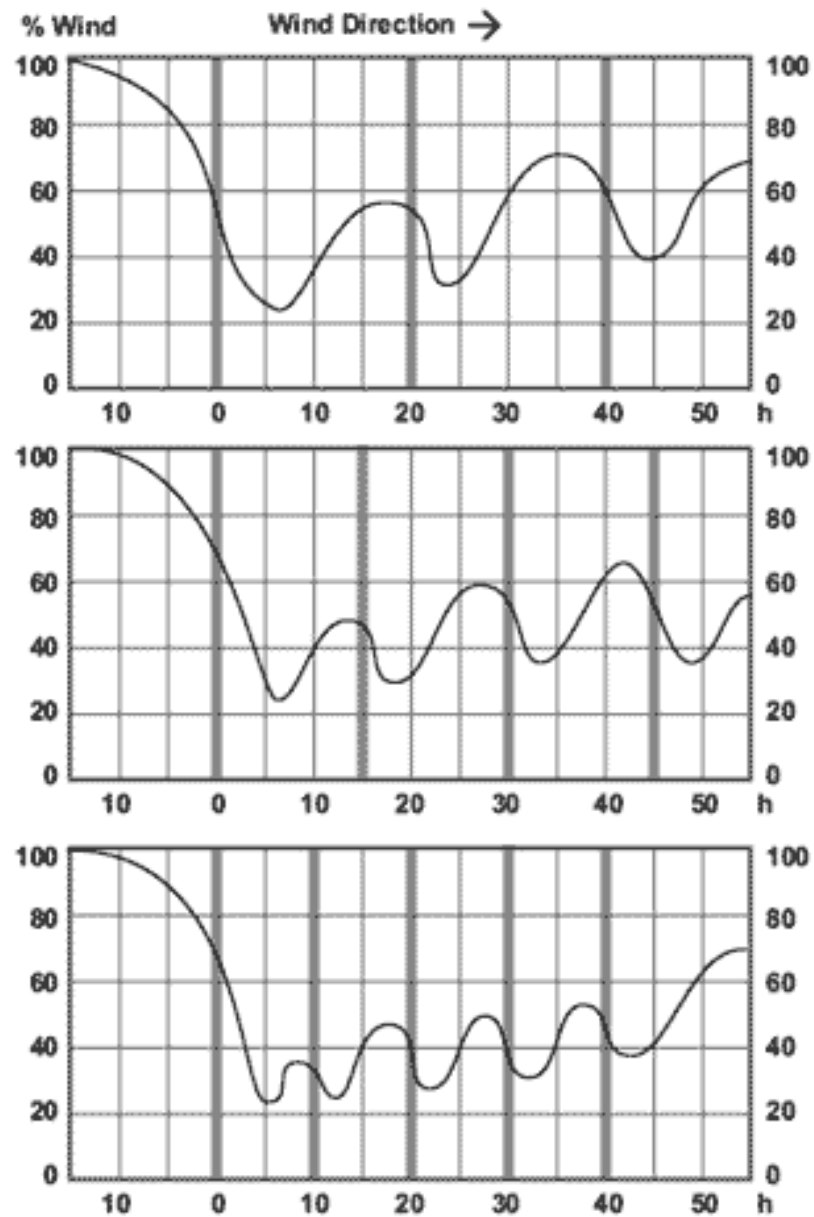
JÚLÍ



Sólin hitar sand og grjót meira en laufið

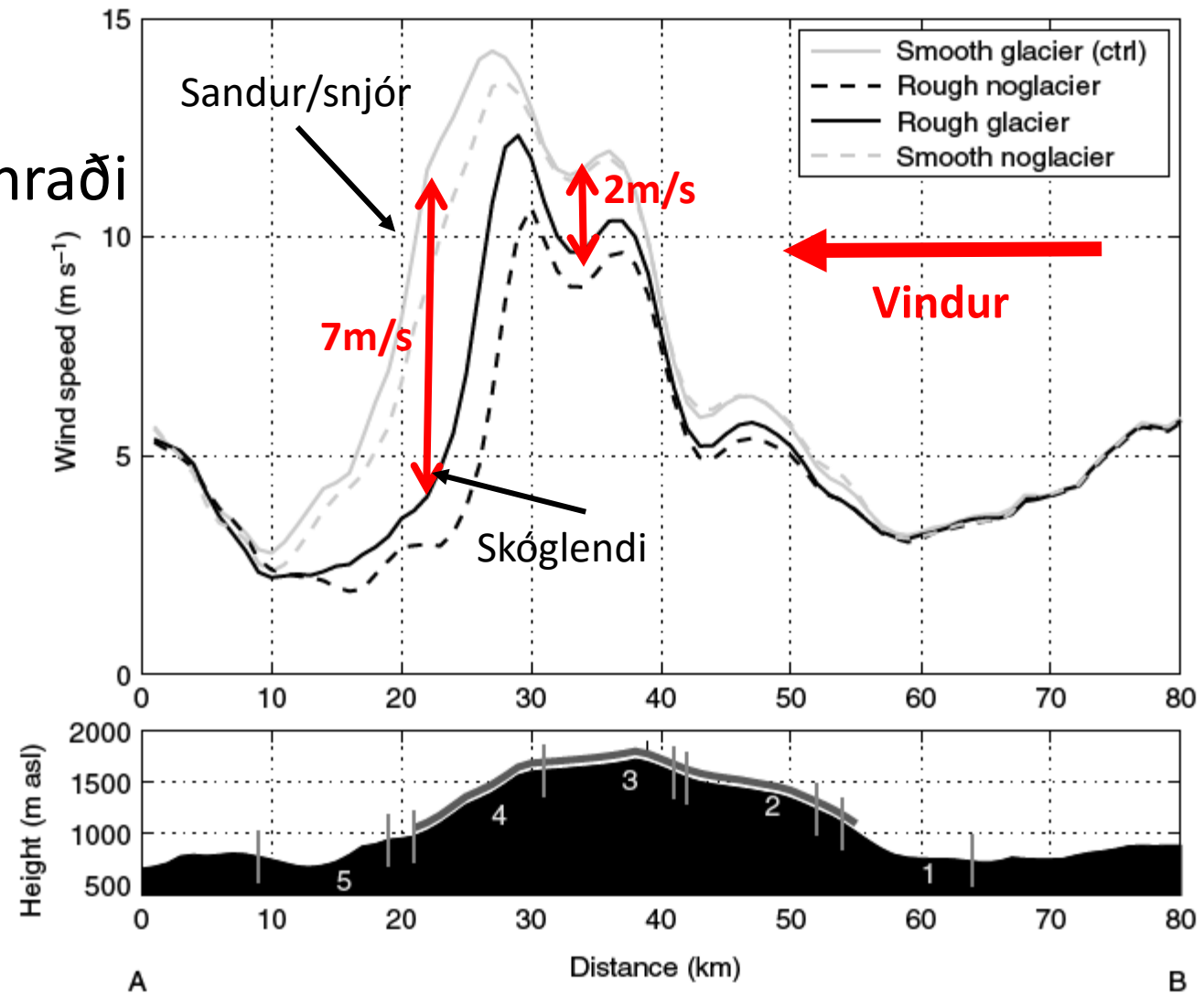
Bolli P. o. fl.

Vindur er ekki
línulegt fall
af fjölda skjólbelta

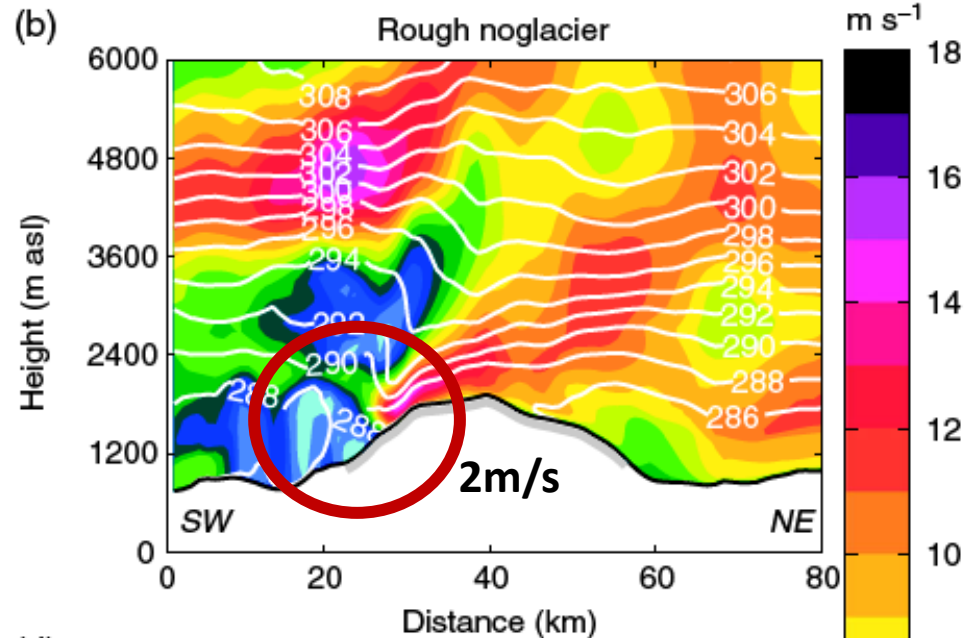


Nageli 1964

Vindhraði

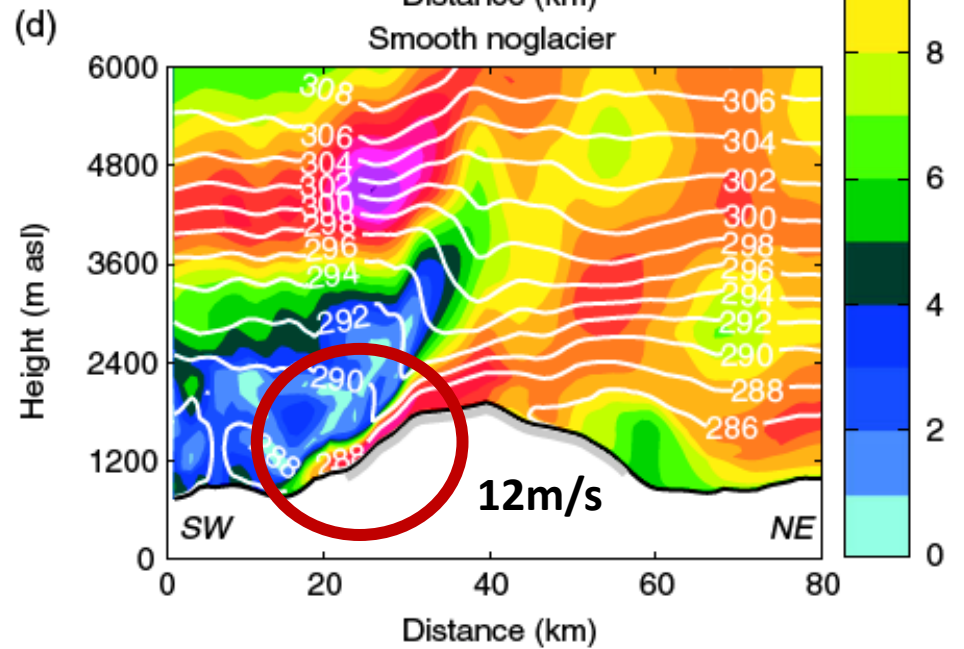


← Vindur



m/s

Skóglendi



Sandur

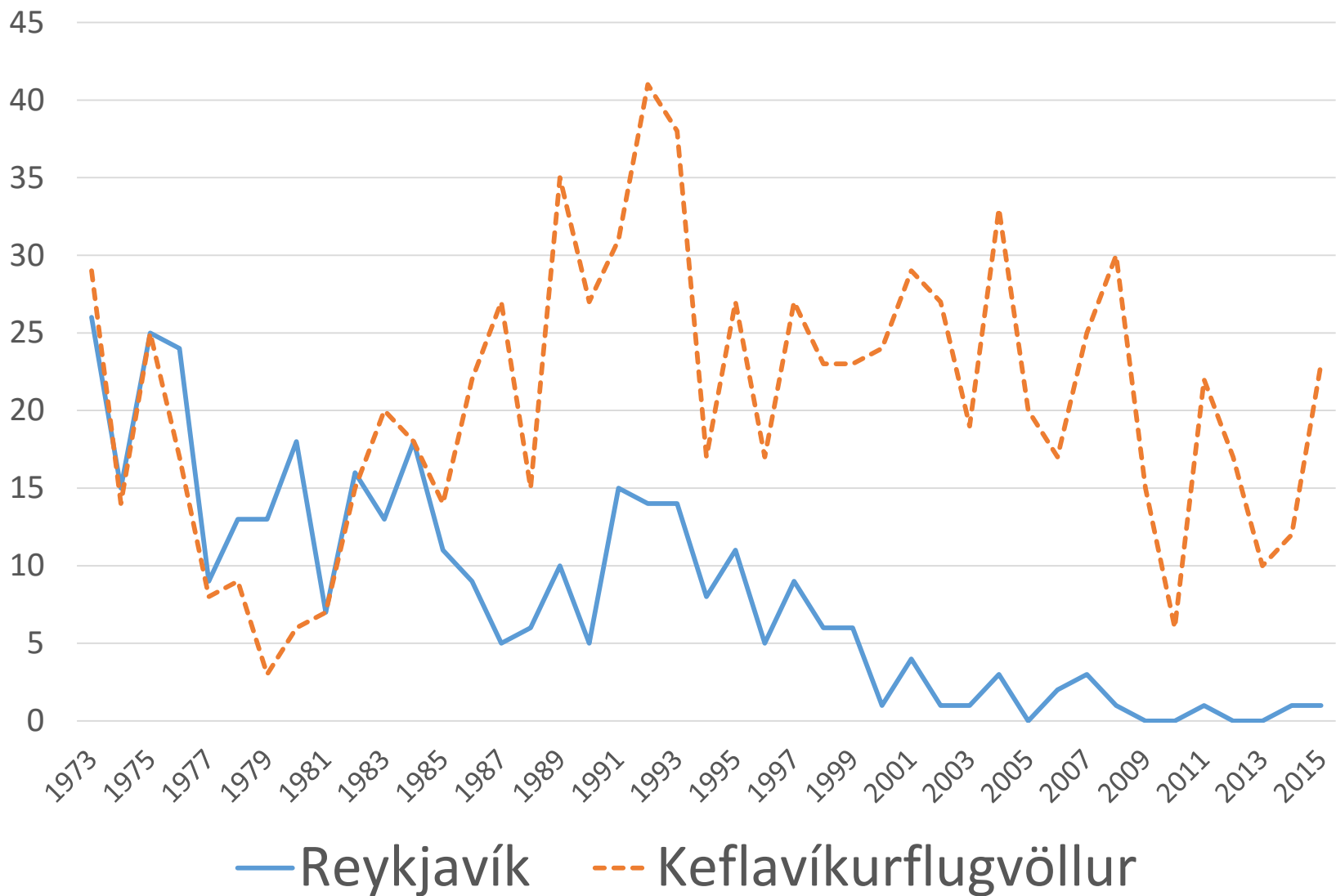
Vindáttir í stormum í Öskjuhlíð



Aukin byggð og gróður hlýtur
að hafa dregið mátt úr óveðrunum

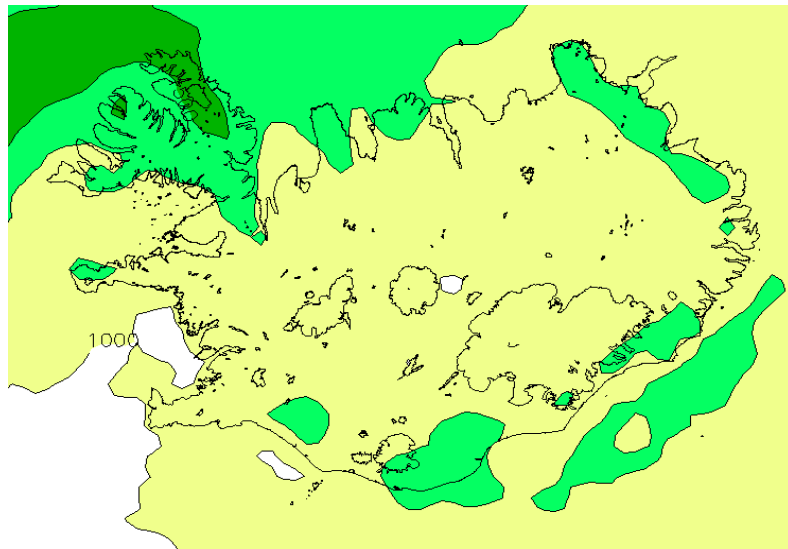


Fjöldi stormdaga á ári 1973-2015

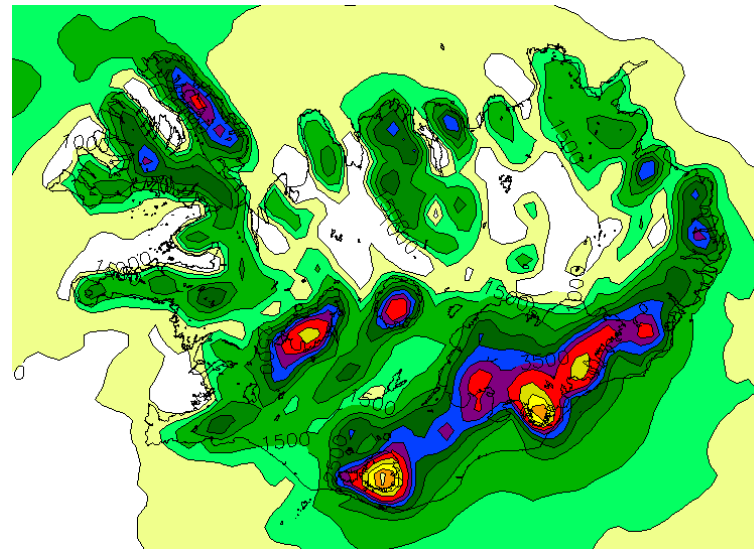


**Skyldi mesta vindafarsbreyting á Íslandi
verða vegna breytts gróðurfars?**

Ársúrcoma (MM5 dx=8km)

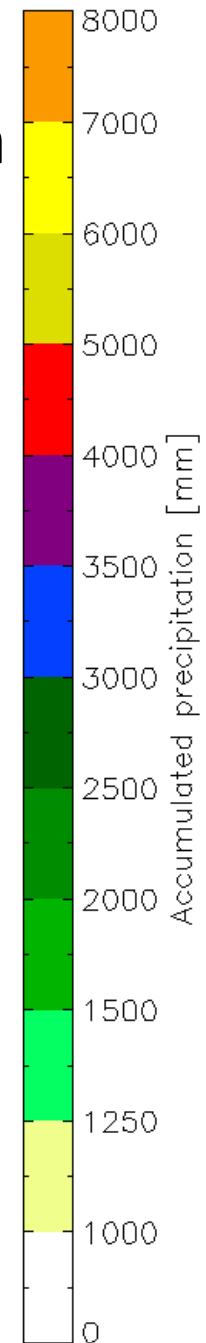


Flatt

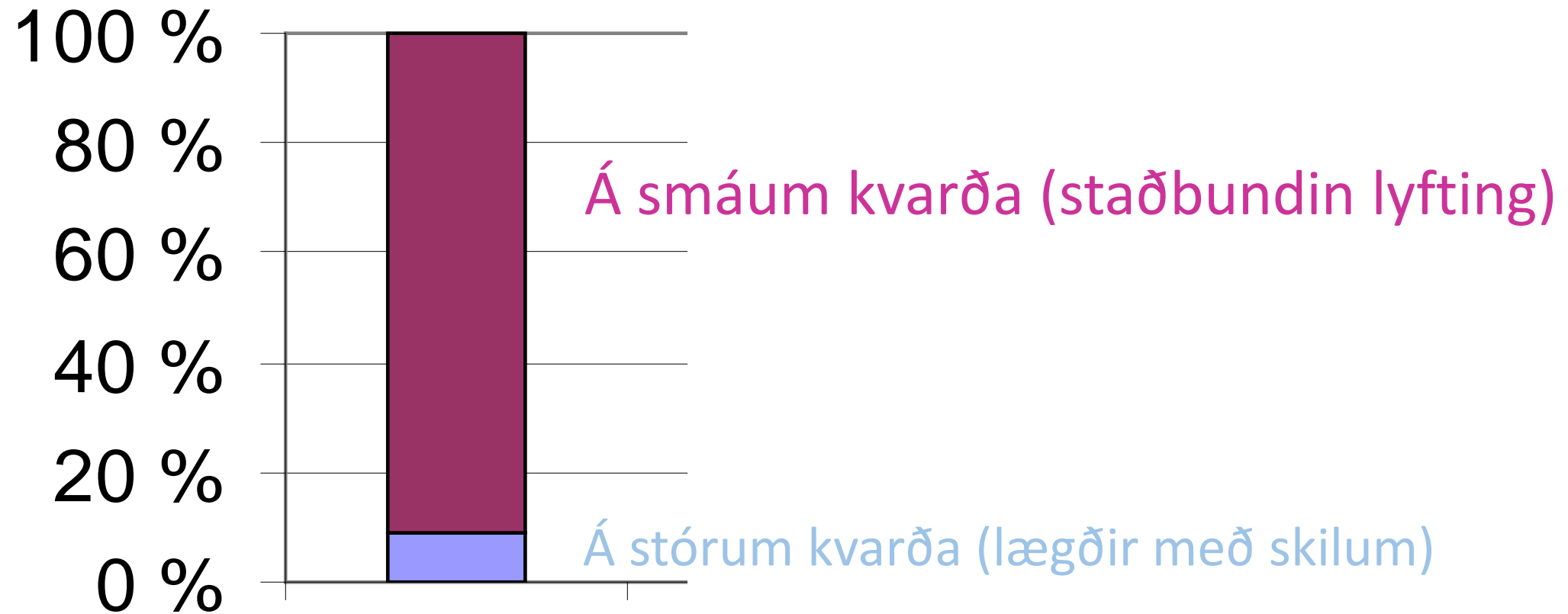
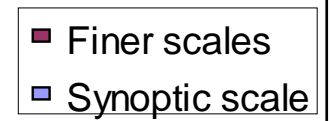


Með fjöllum

mm

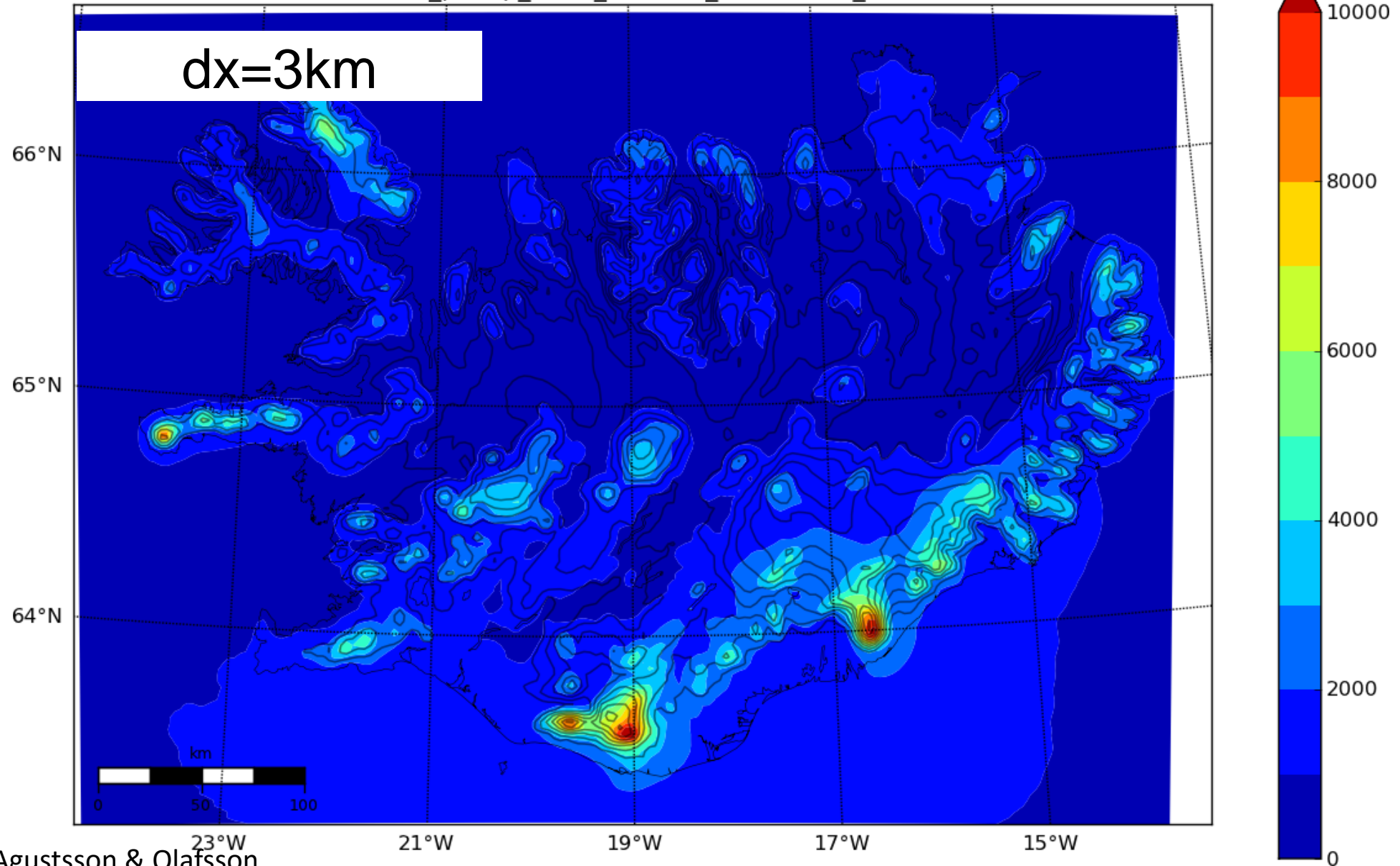


Ársúrcoma á Öræfajökli

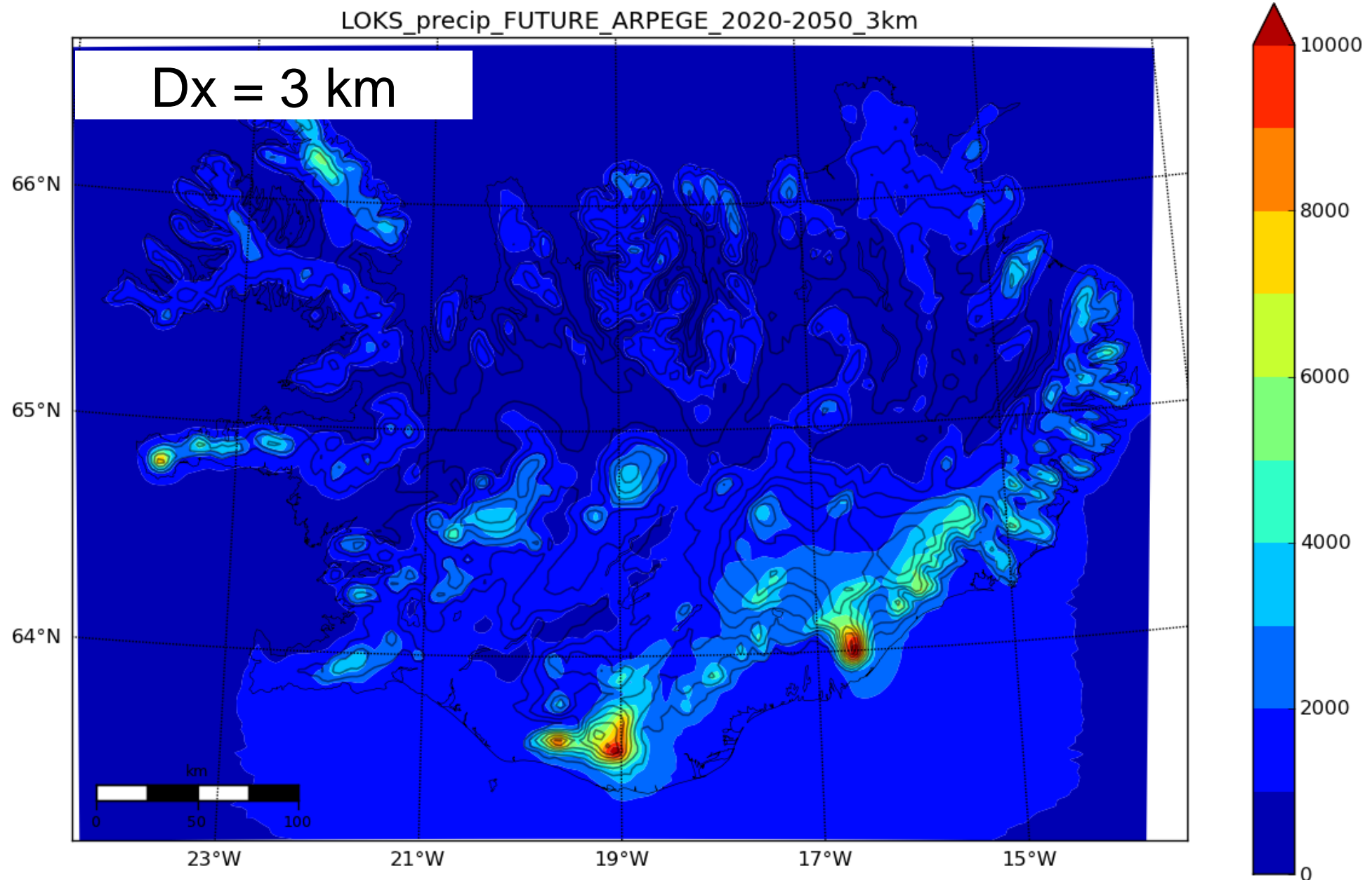


Meðalársúrkröma viðmiðunartímabils

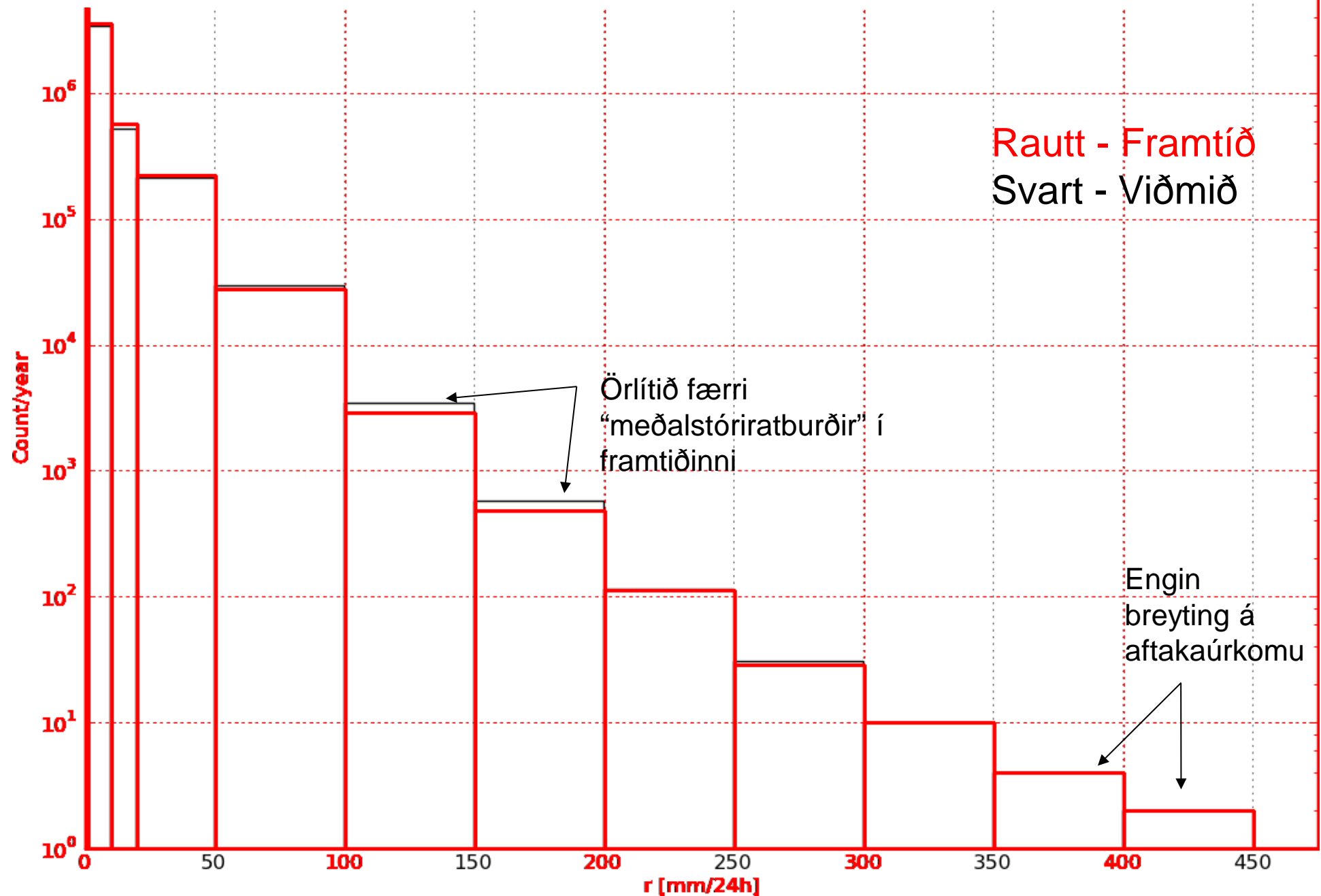
LOKS_precip_CTRL_ARPEGE_1960-1990_3km



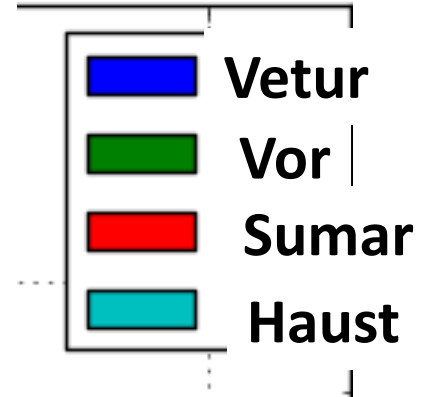
Meðalársúrcoma 2020-2050



10^7 Sólarhringsúrcoma (dx=3km)



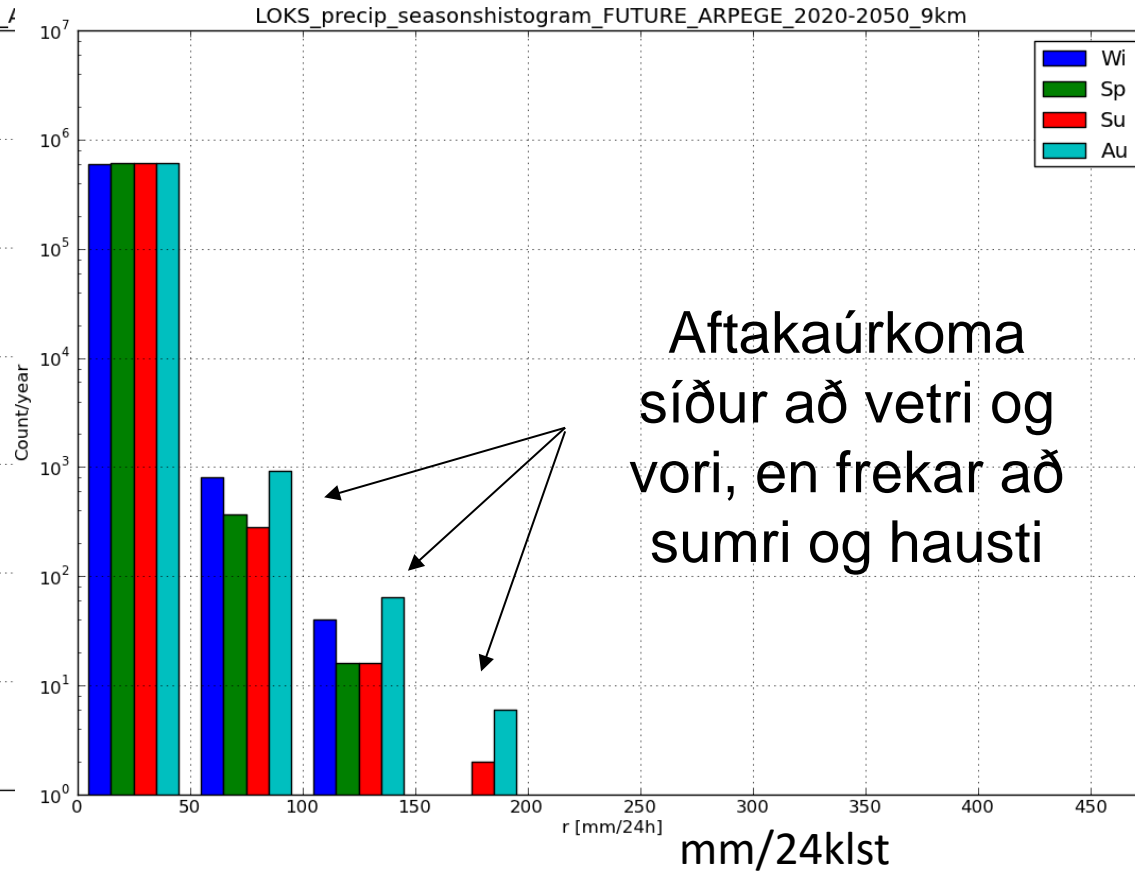
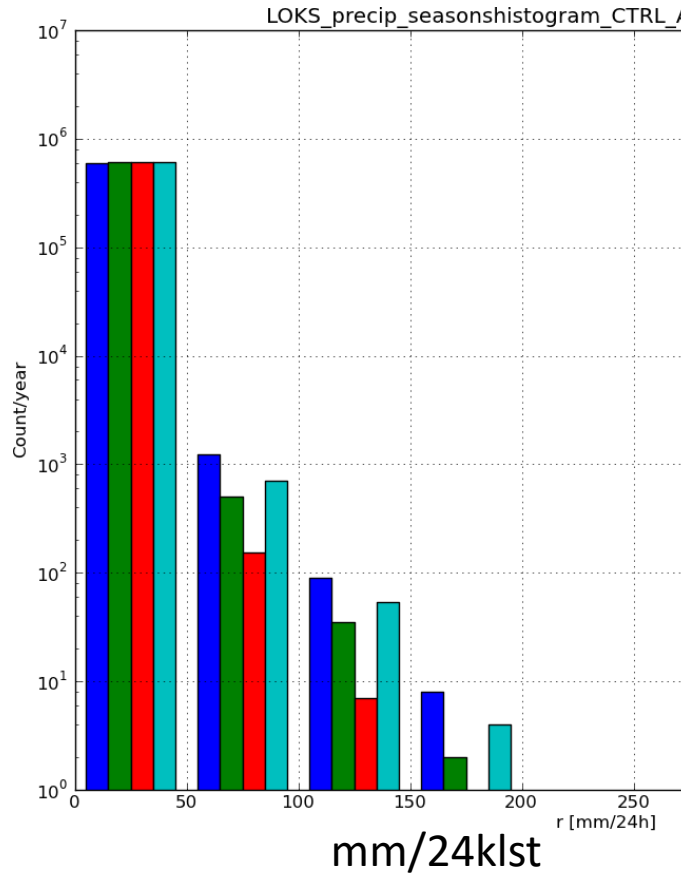
Sólarhringsúrcoma (dx=9km)



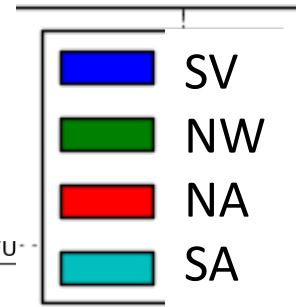
Viðmiðunarveðurfar

Framtíðarveðurfar

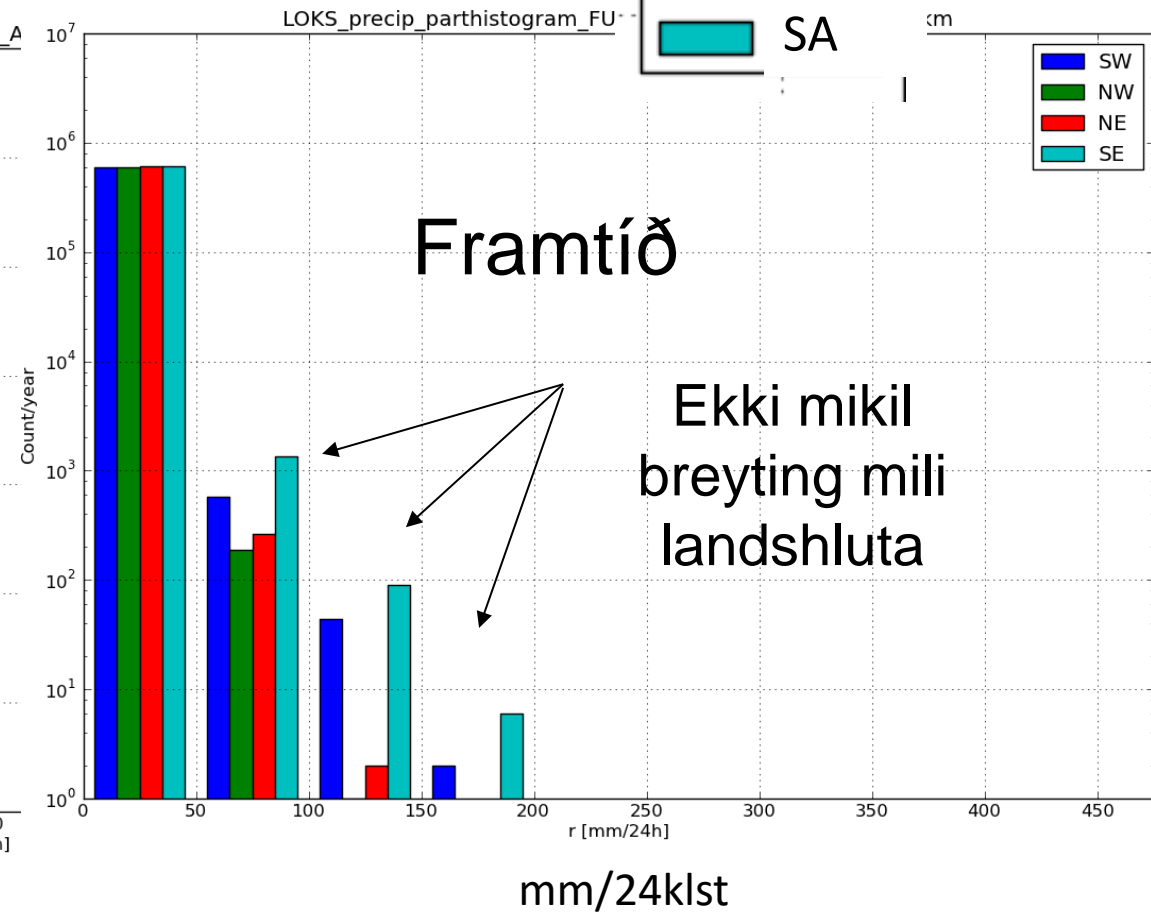
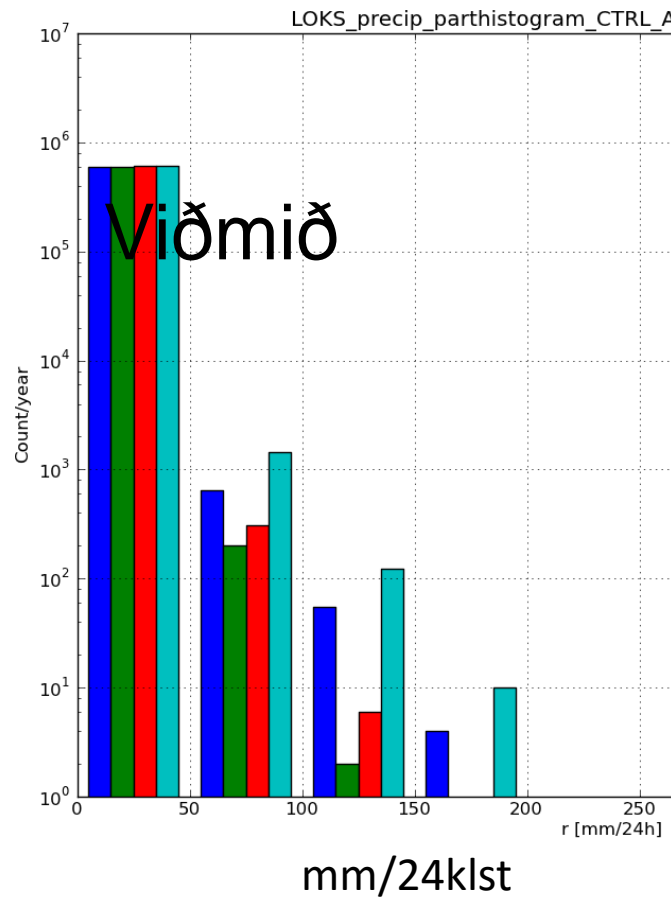
Tíðni



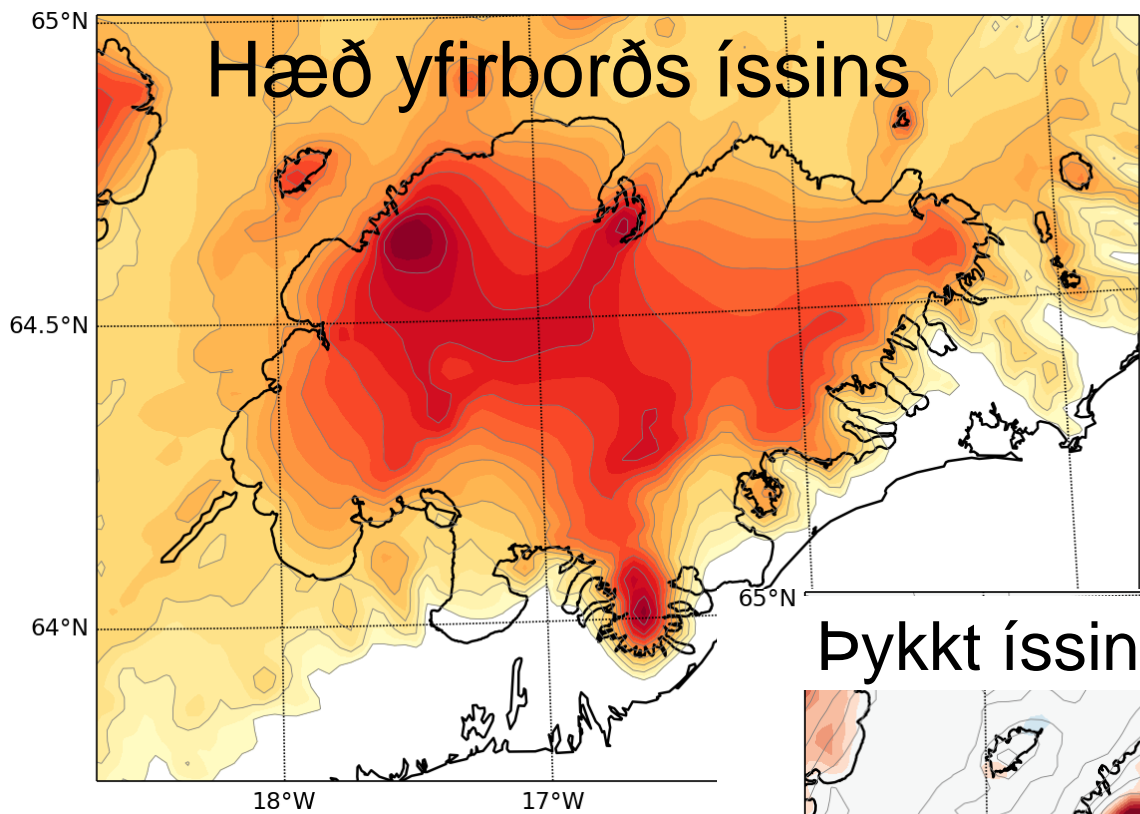
Sólarhringsúrcoma (dx=9km)



Tíðni

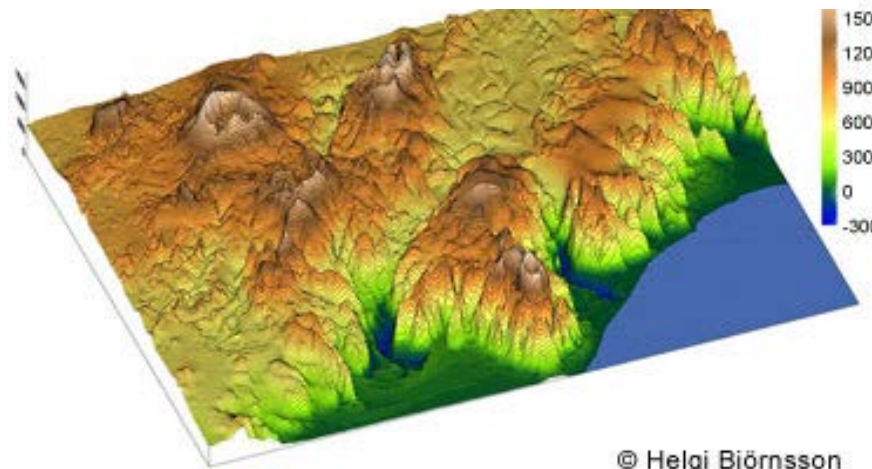


Verða þá engar úrkomubreytingar?



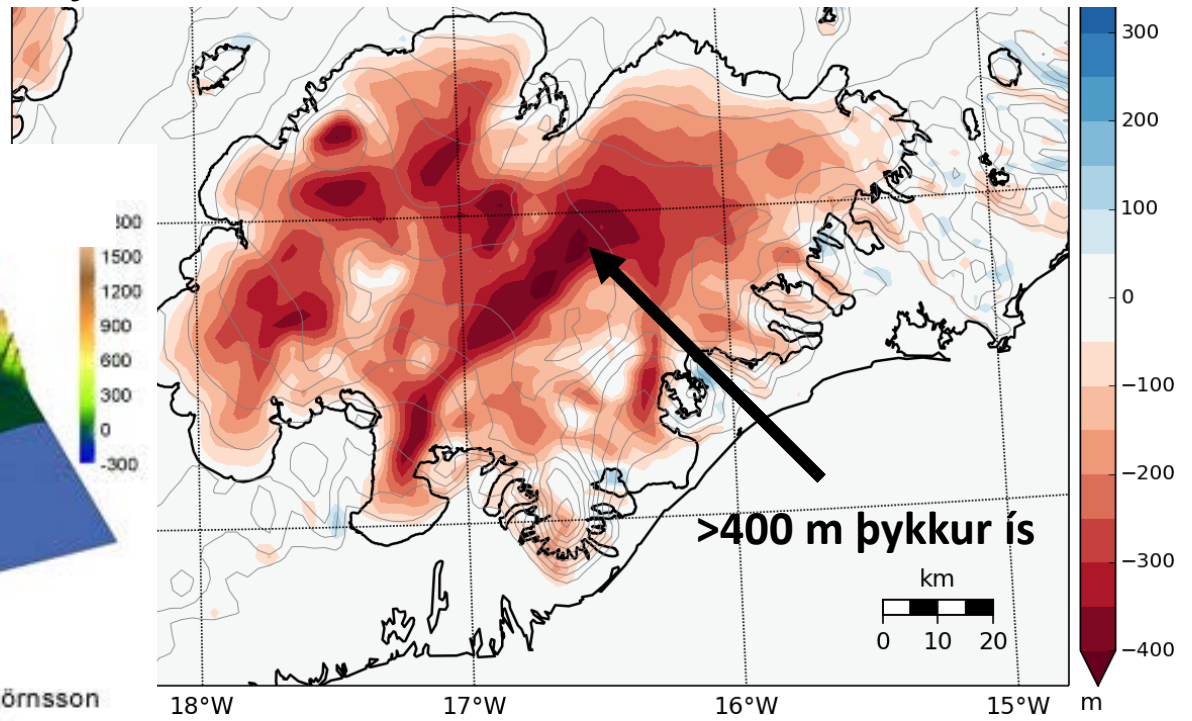
Háskólahópurinn hefur mælt hæð lands undir ísnum (Helgi, Finnur o.fl.)

Jörðin undir ísnum



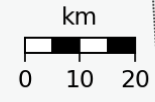
© Helgi Björnsson

Þykkt íssins

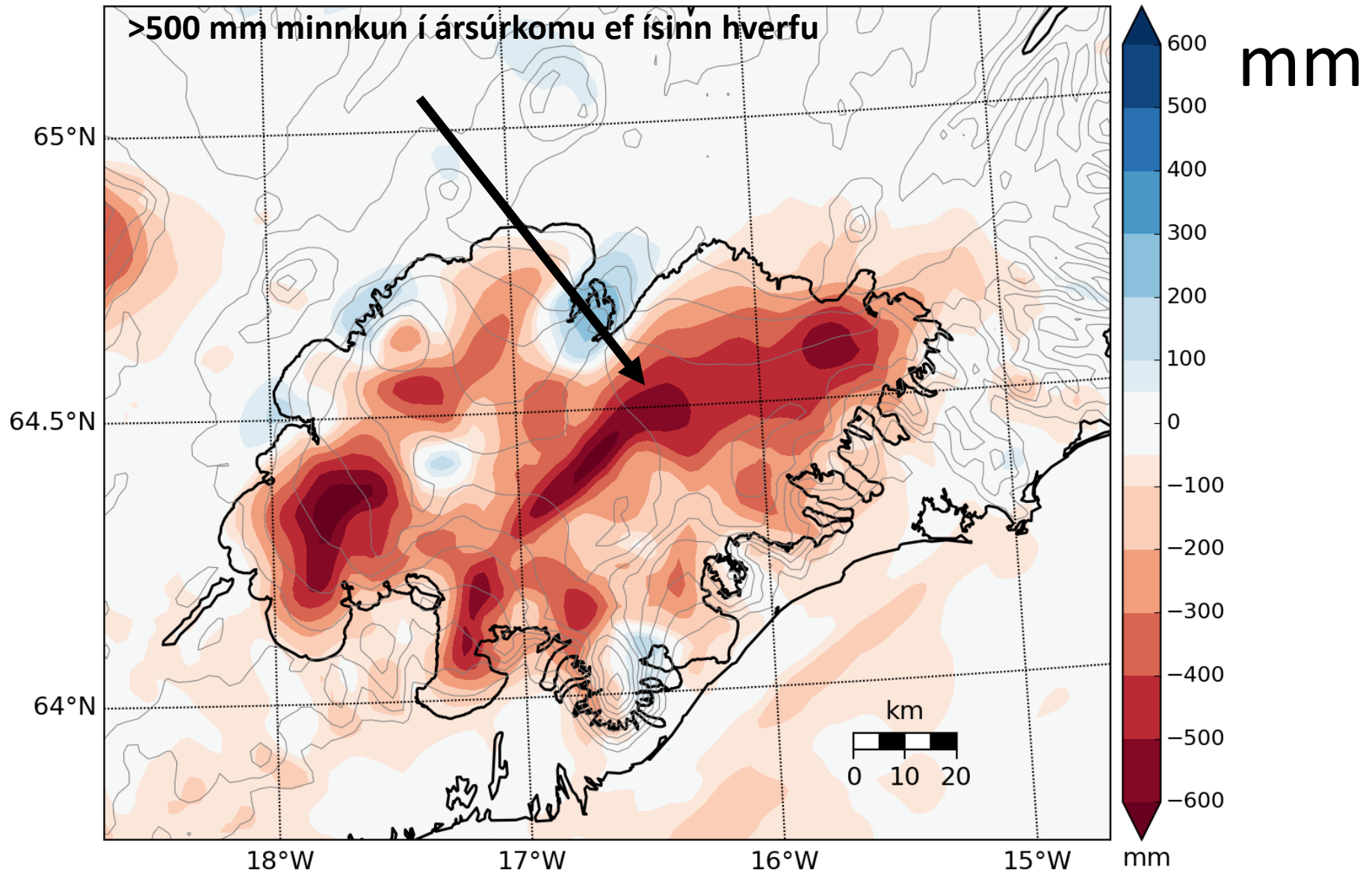


m

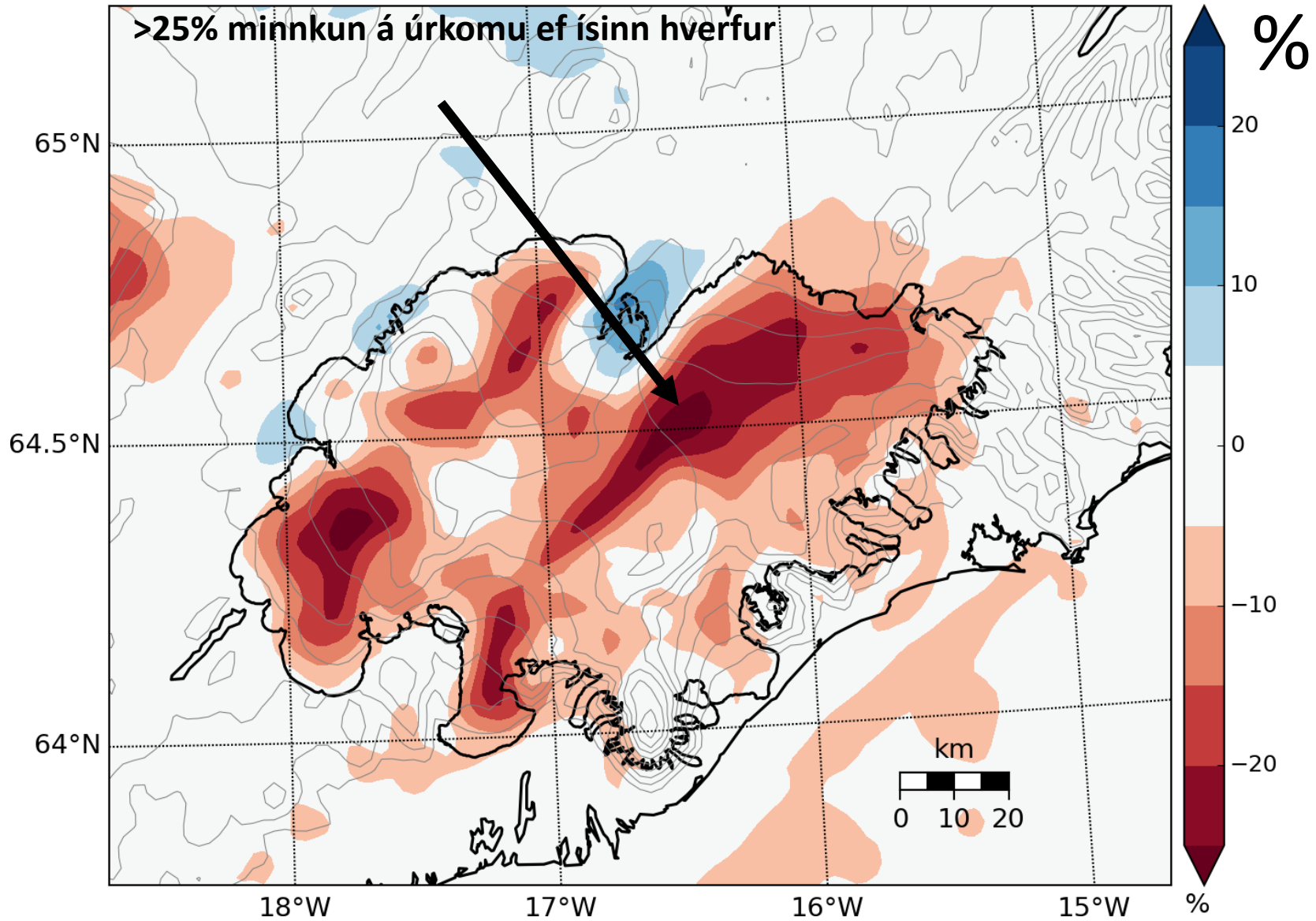
>400 m þykkur ís



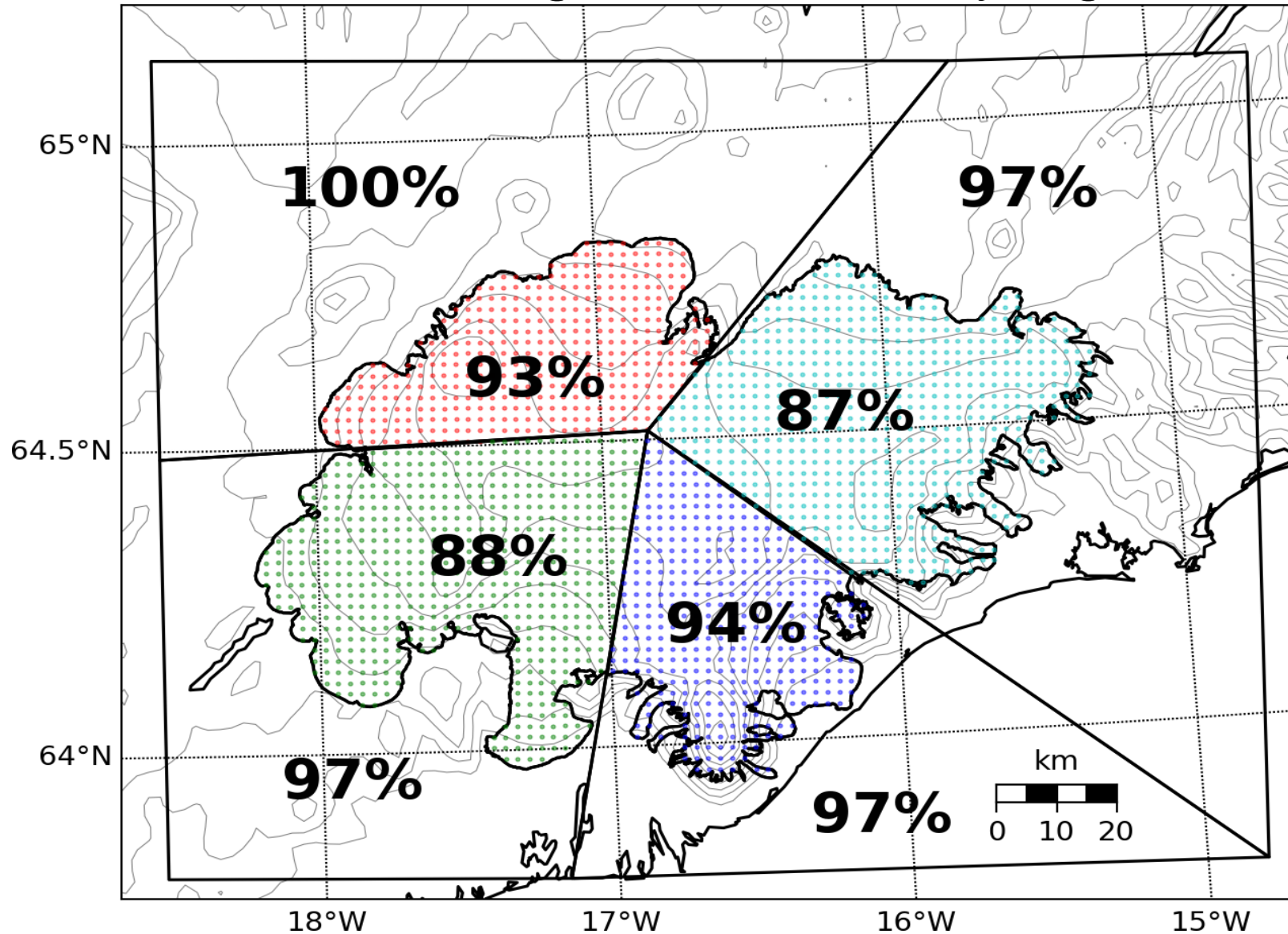
Ársúrkoma í ísleysi mínus úrkoma með jökli



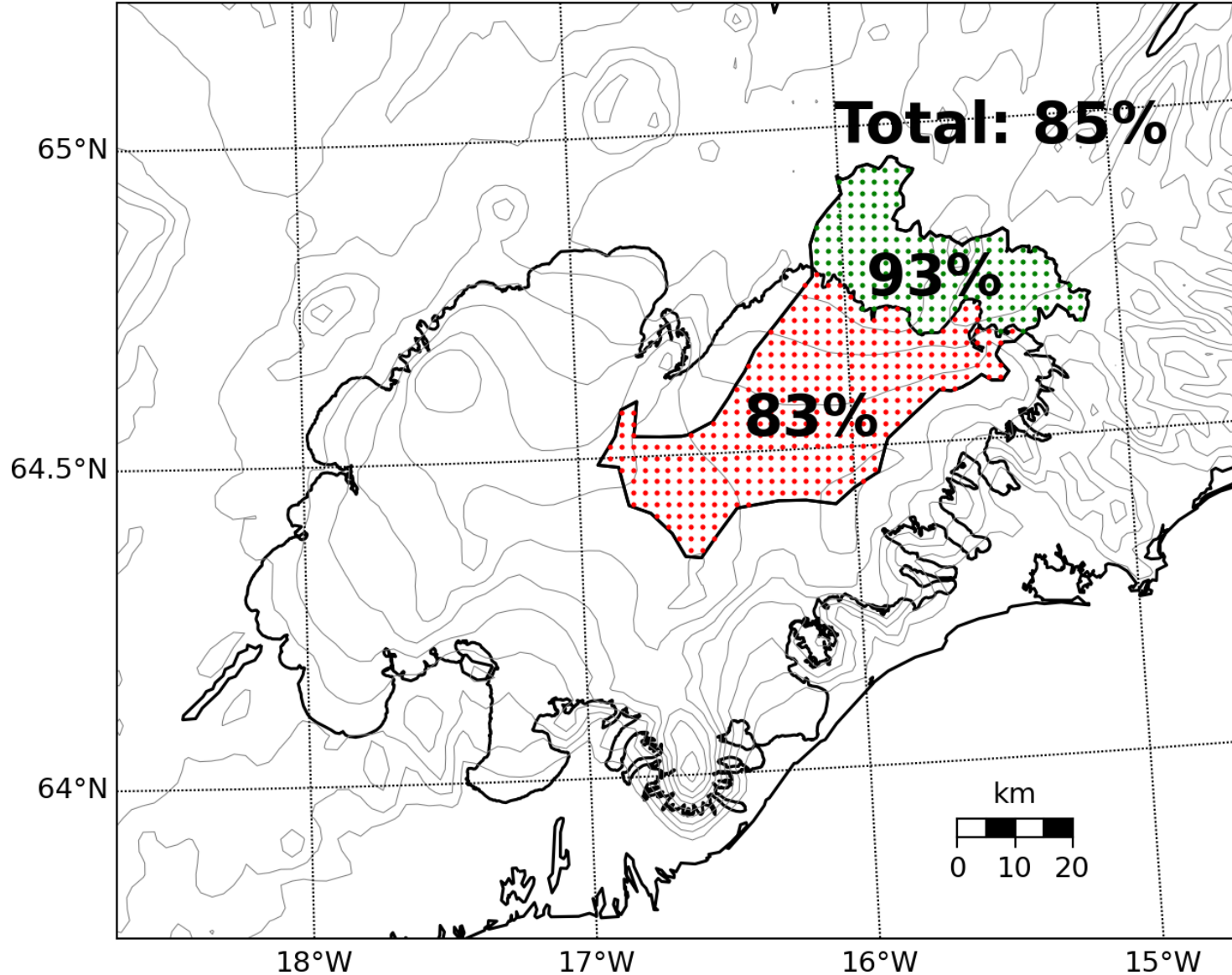
(Ísleysi mínus viðmið) / viðmið Hlutfallsleg ársúrkomubreyting

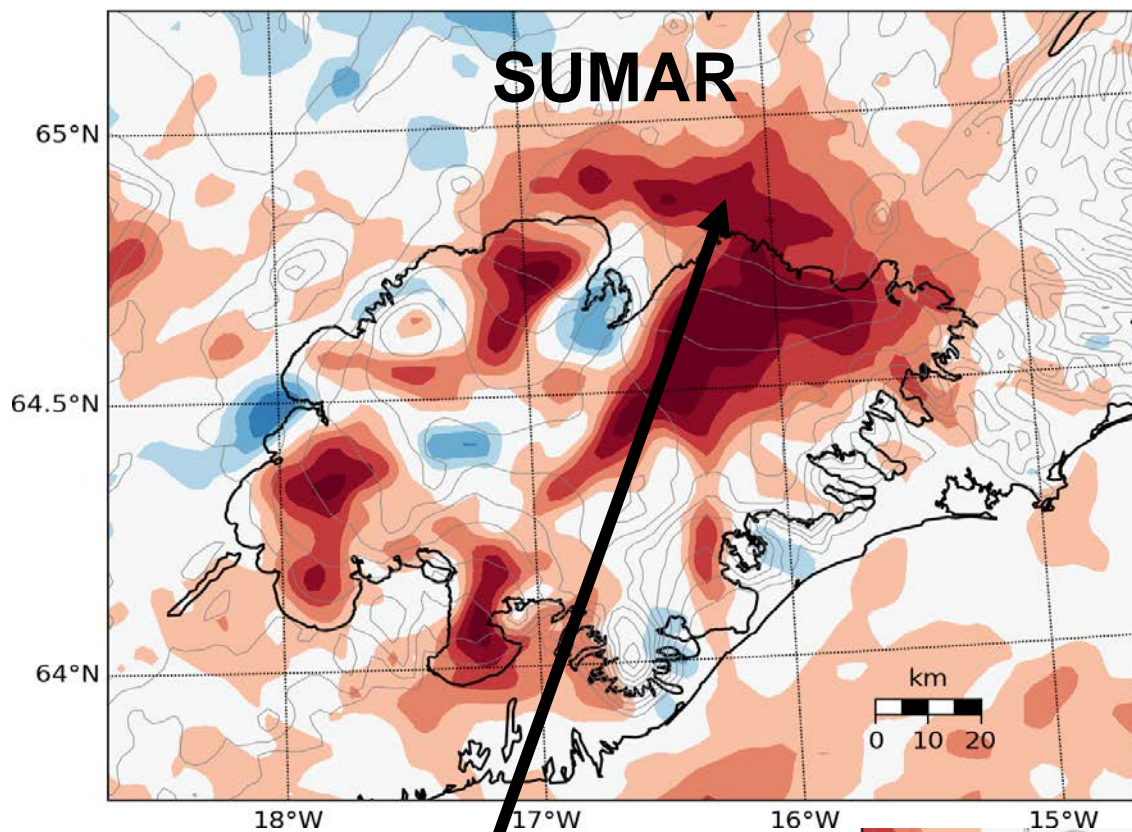


(Ísleysi mínus viðmið) / viðmið Hlutfallsleg ársúrkomubreyting



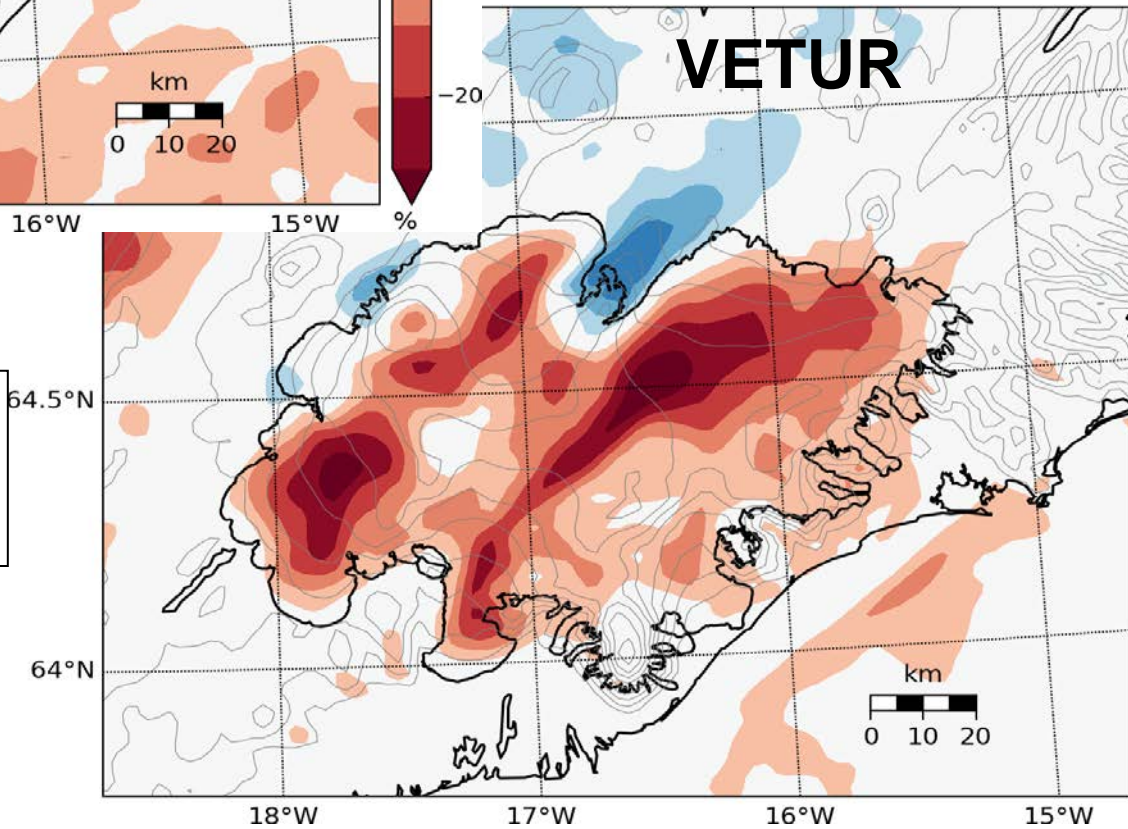
(Ísleysi mínus viðmið) / viðmið Hlutfallsleg ársúrkomubreyting



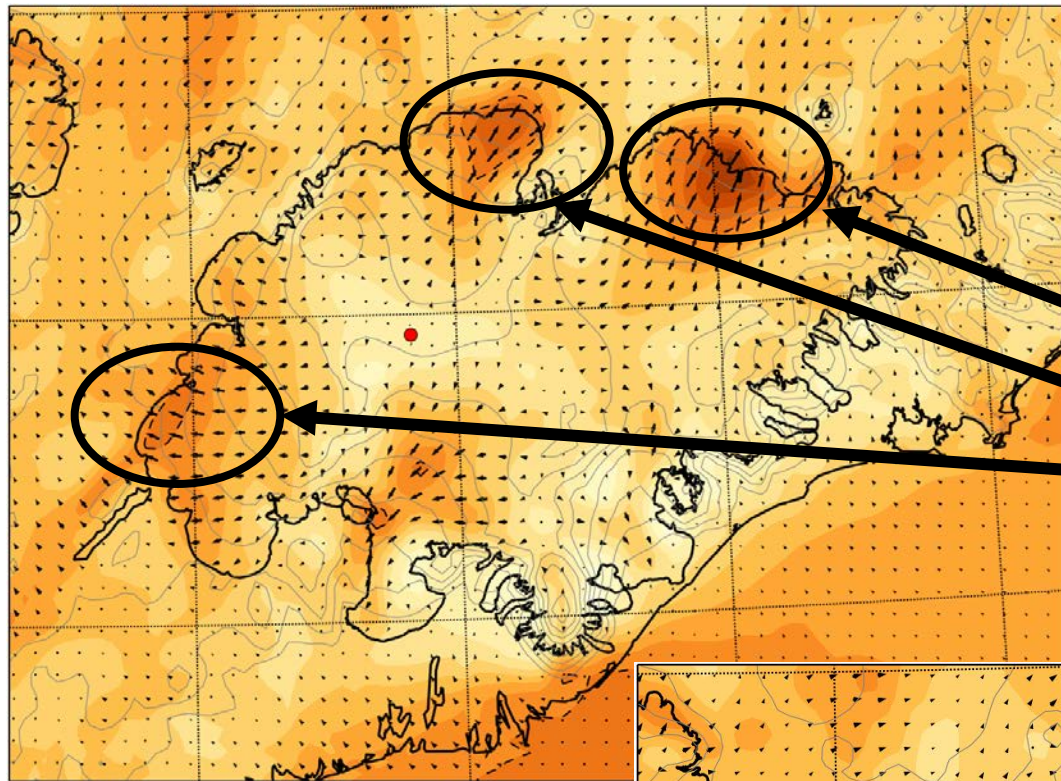


%
 (Ísleysi mínus viðmið)
 / viðmið
 Hlutfallsleg
 ársúrkomubreyting

Ef ísinn hverfur minnkar
 sumarúrkoman yfir
 söndunum fyrir norðan jökul



%



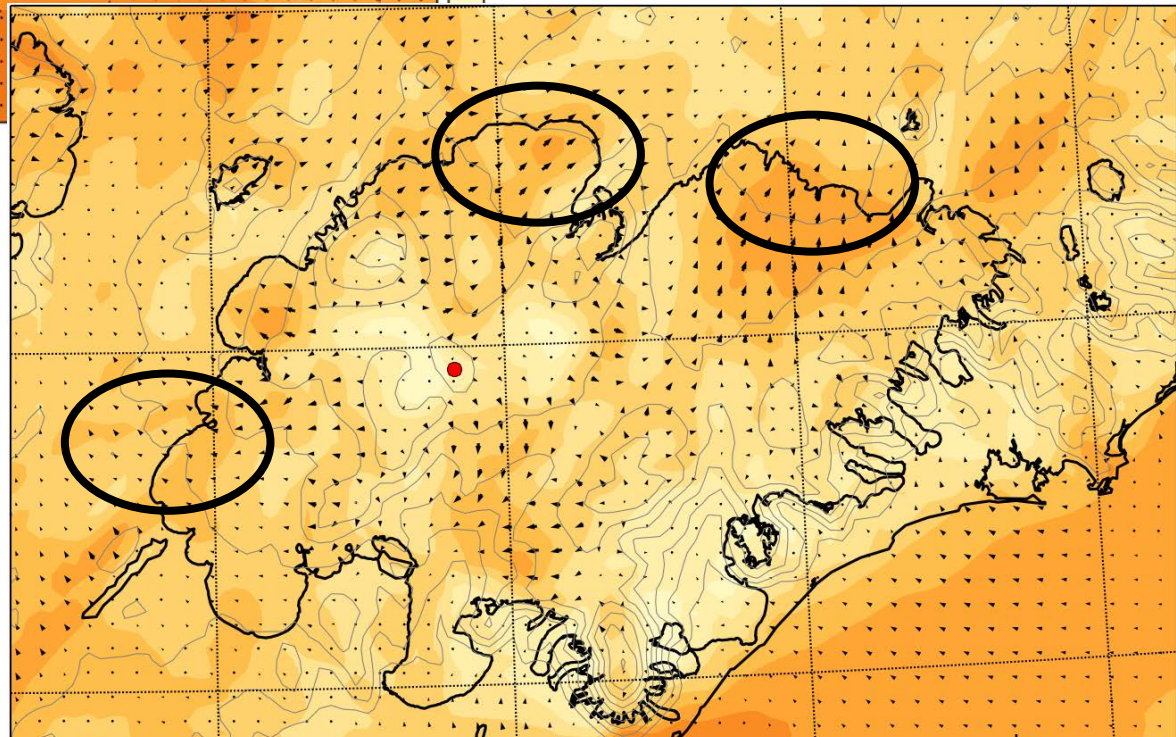
SUMARVINDUR MEÐ JÖKLI

Fallvindarnir á
sumrin hverfa!

18°W

17°W

SUMARVINDUR ÁN JÖKULS



m/s

8

7

6

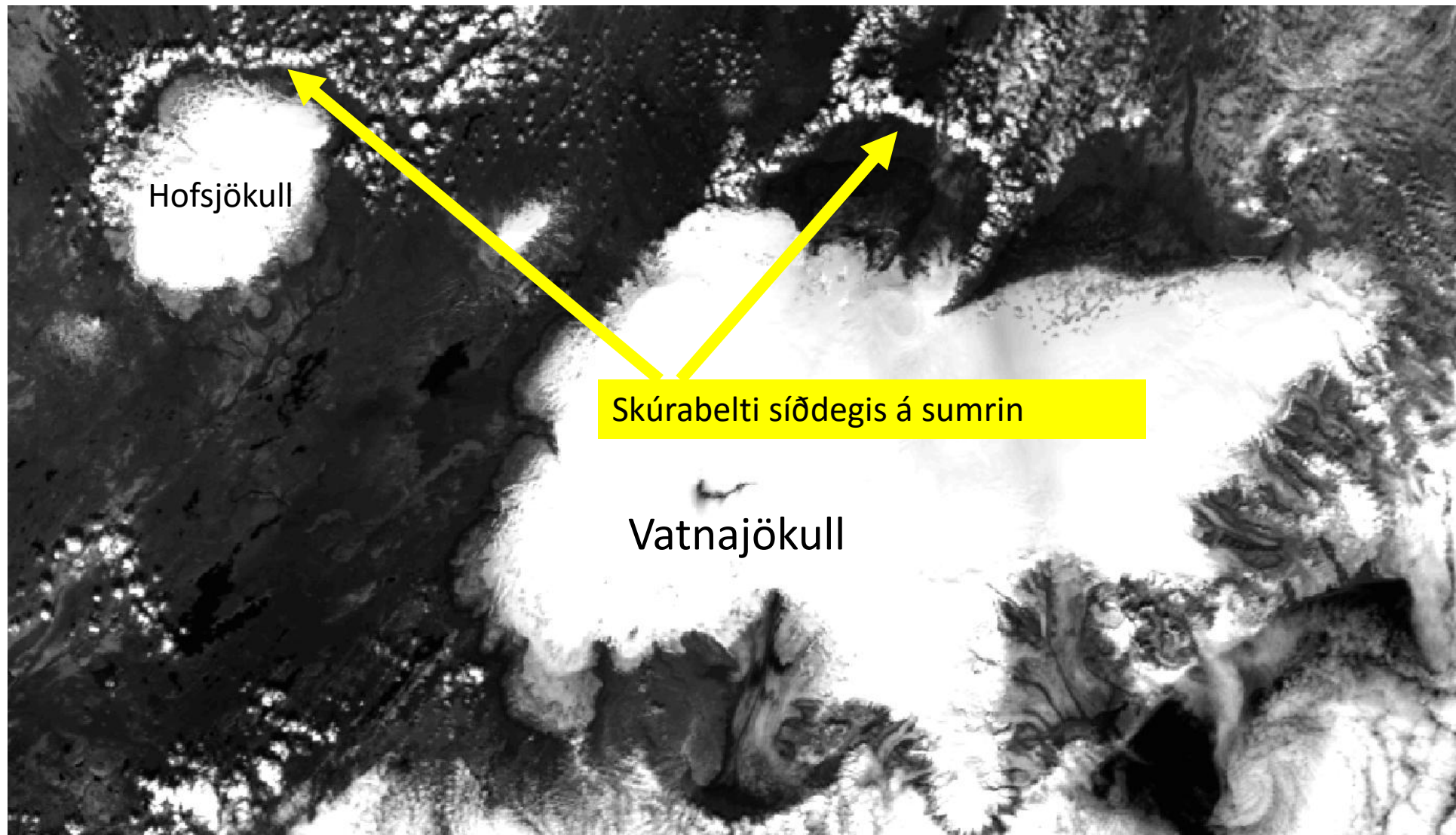
5

4

3

2

Skýjamynd frá gervitungli



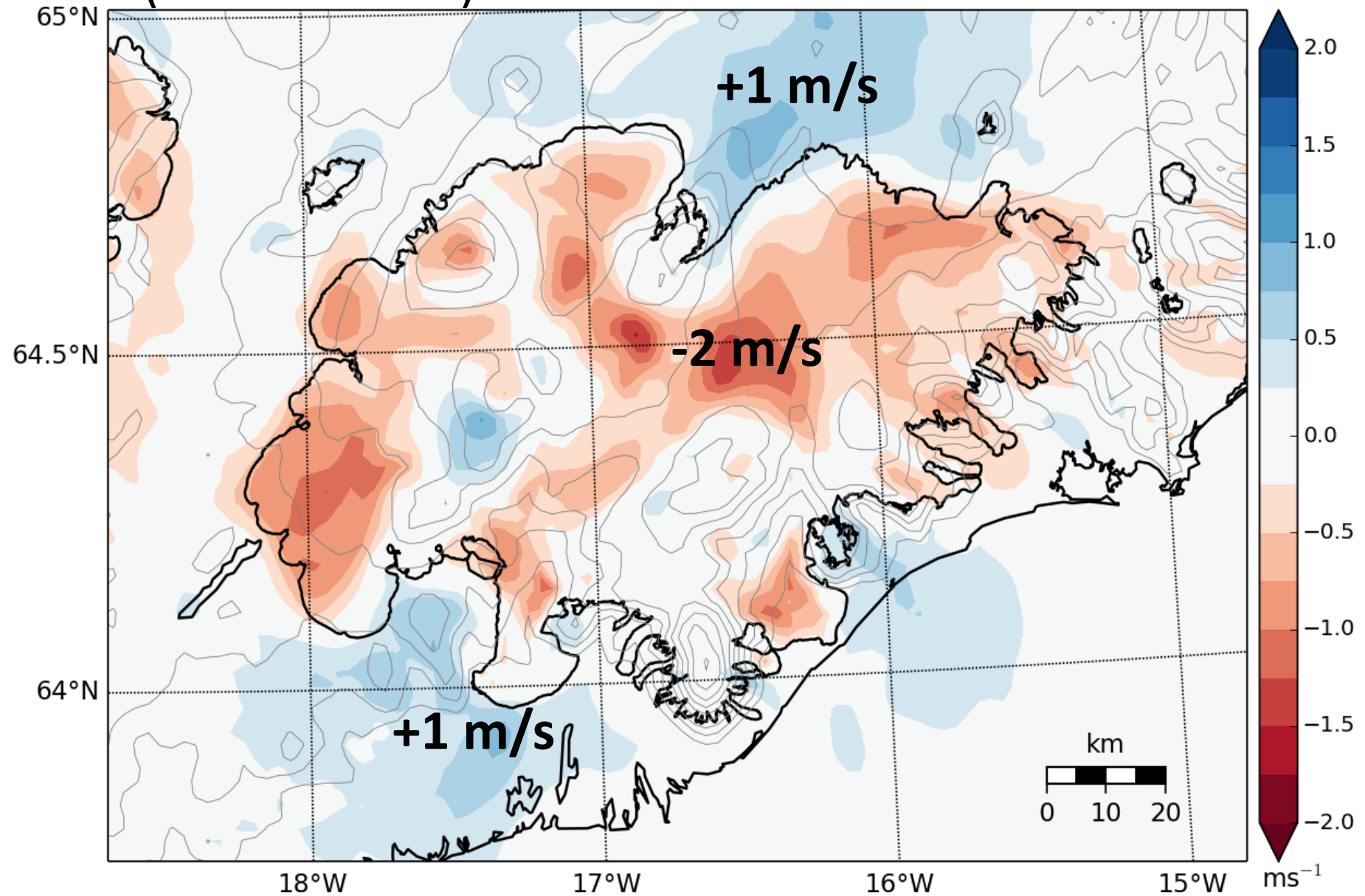
Að lokum: Nokkur orð um veðurspár

belgingur.is

vedur.is

brunnur.vedur.is

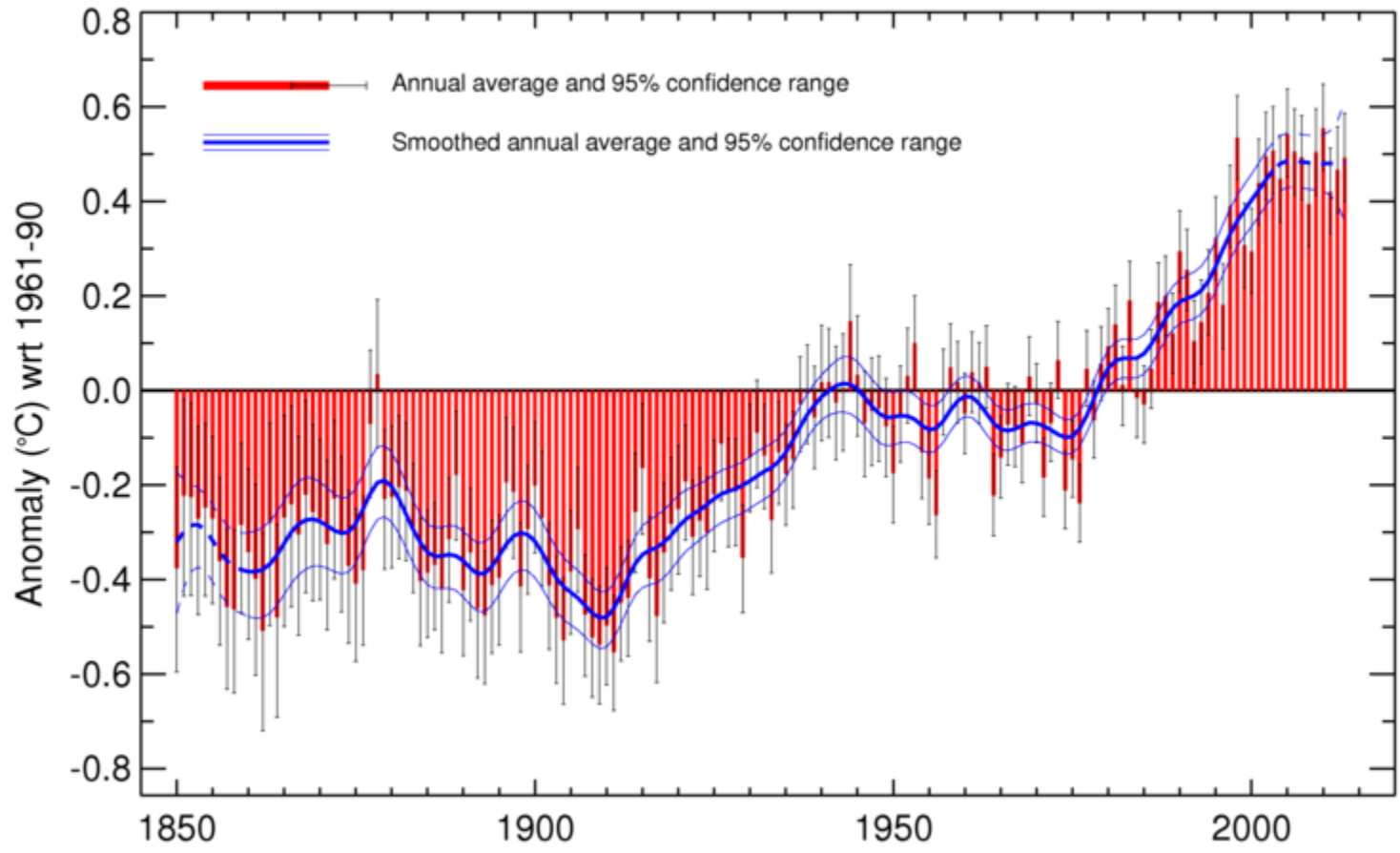
Change in surface winds when the ice is removed (CNTRL-Noice)





Global average temperature 1850-2013

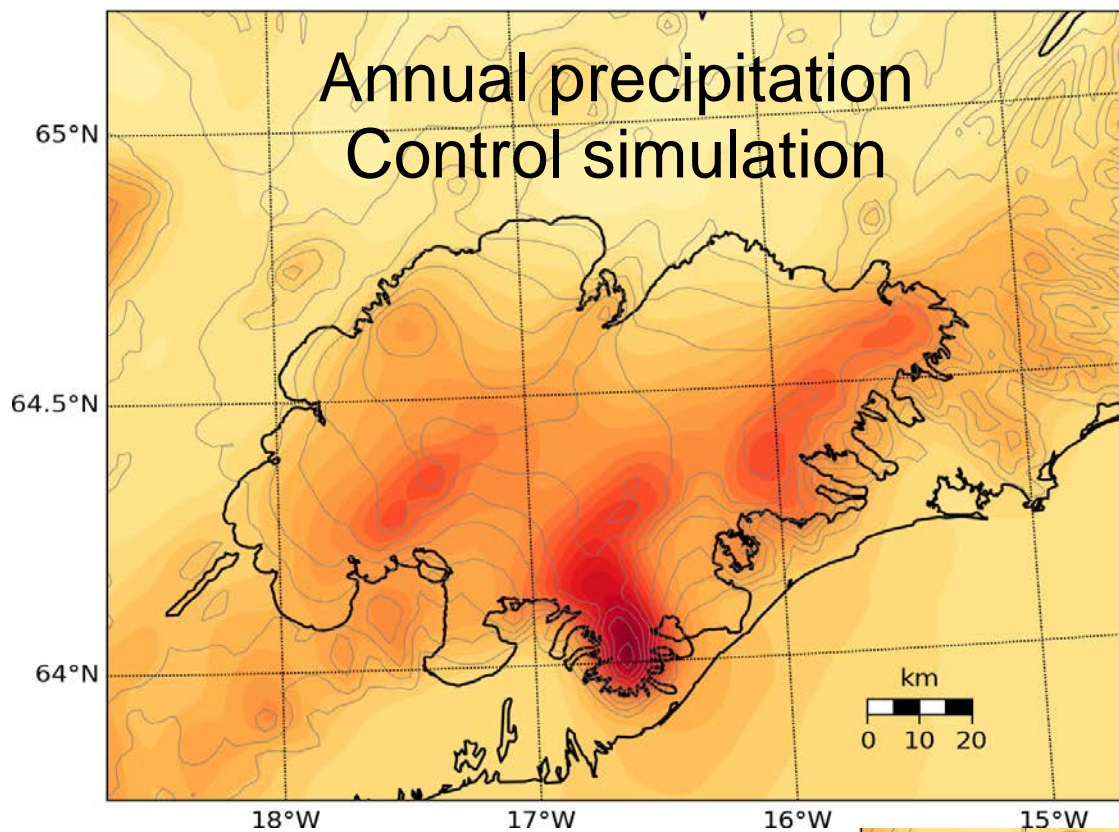
Updated from Morice et al. 2012



Met Office Hadley Centre

Source: www.metoffice.gov.uk/hadobs

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What is the effect of Vatnajökull ice cap on the precipitation distribution and magnitude in the region?

- WRF atmospheric model at 2 km
- Two years: 2004-2006
- Compare precipitation in two simulations:
 - Ctrl: Current surface
 - Sensitivity: No ice cap

