

Sea surface density changes in the North Atlantic yield large sensitivity

Question 1:

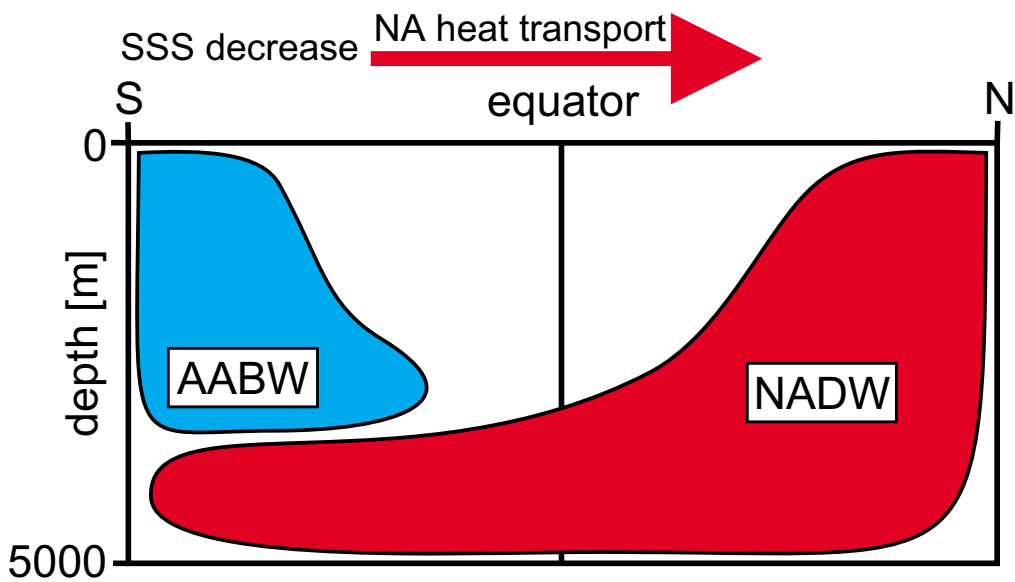
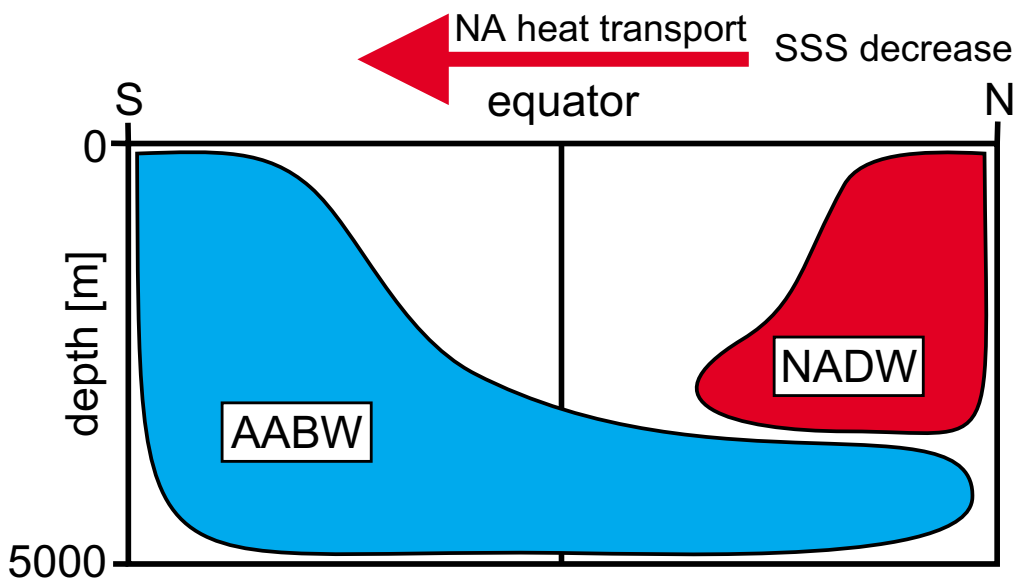
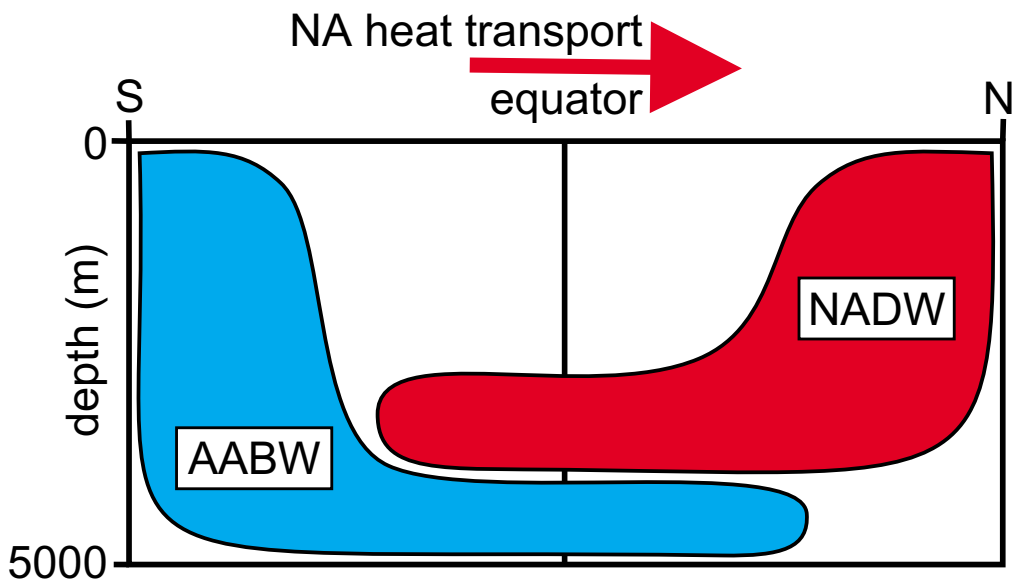
Is this the full story?

- What are the basic differences between southern and northern meltwater events?
- Is the conveyor more sensitive to southern or northern meltwater events?

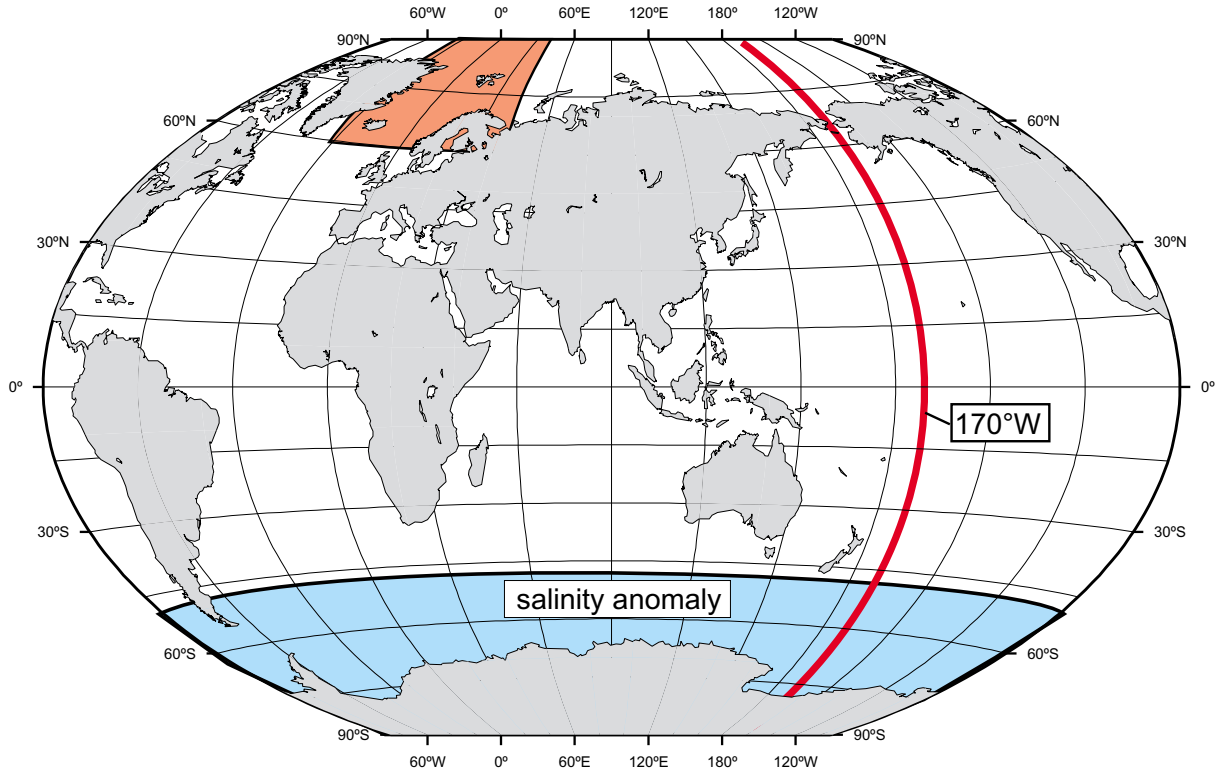
IF NOT:

Question 2:

What are the implications for deep sea circulation, temperatures, and sea level?

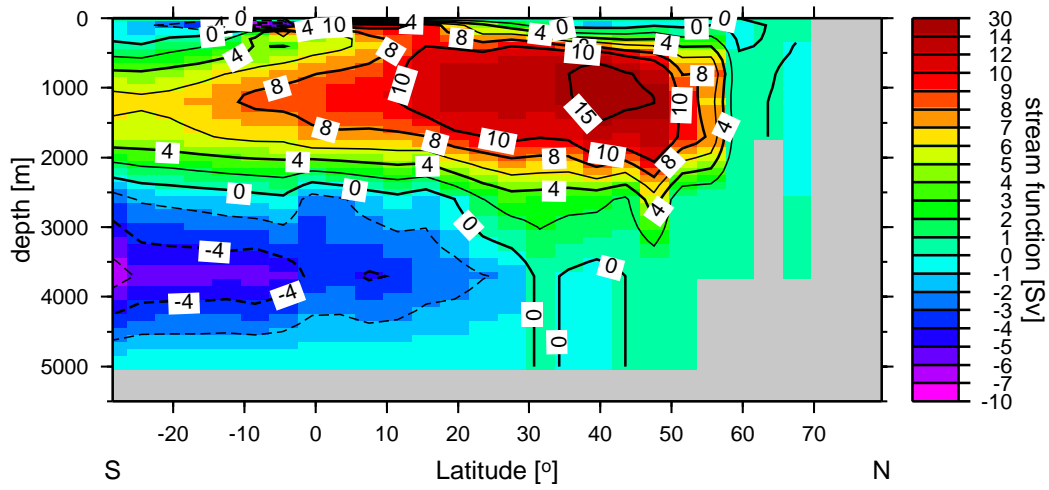


Areas of meltwater anomalies

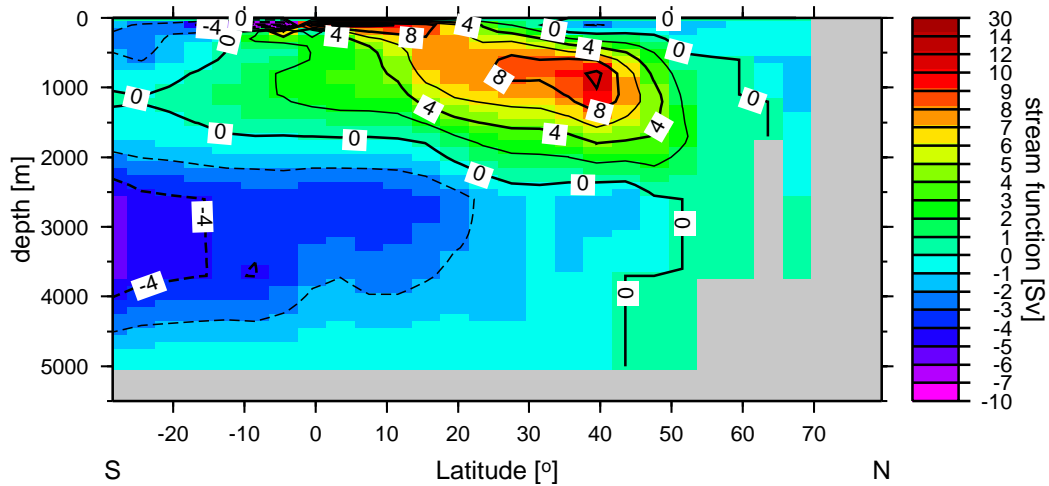


North Atlantic streamfunction

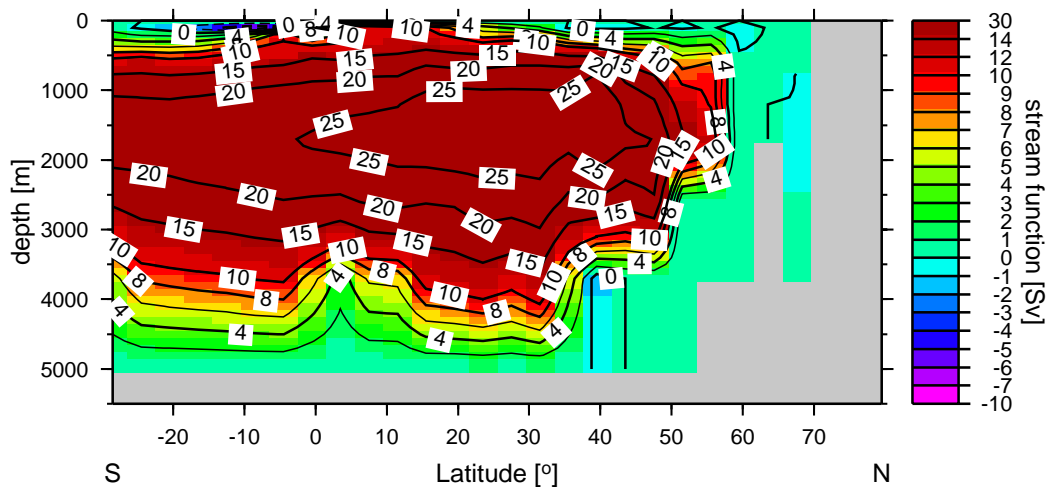
Control run



NA meltwater (-2 psu)

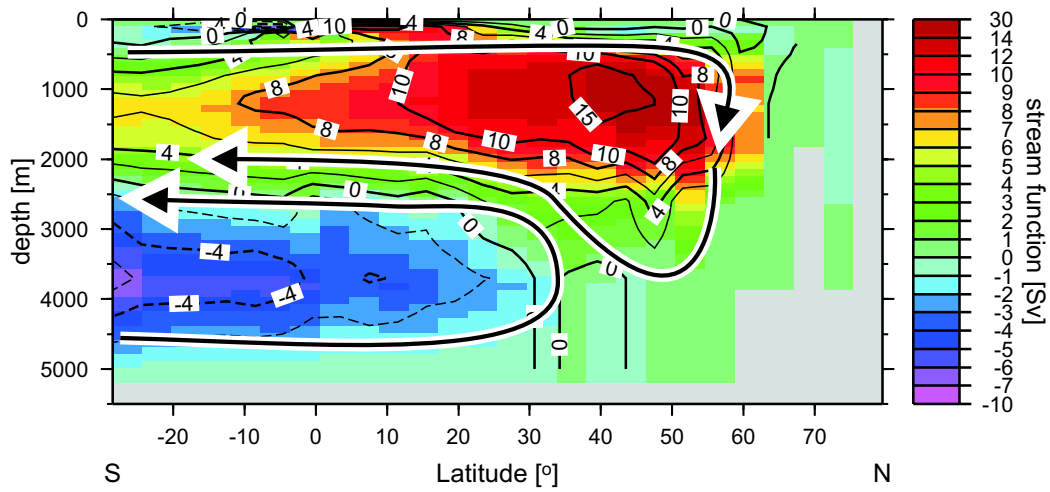


SO meltwater (-1 psu)

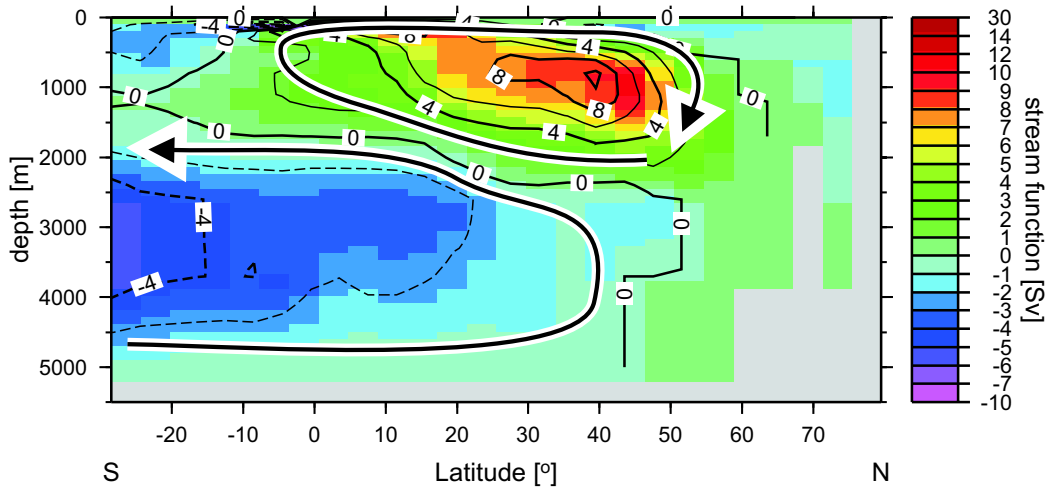


North Atlantic streamfunction

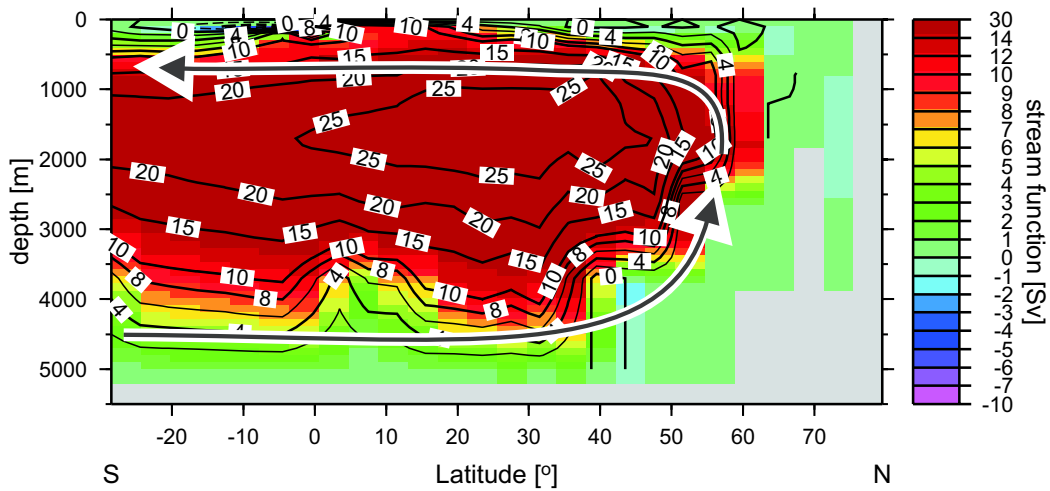
Control run



NA meltwater (-2 psu)

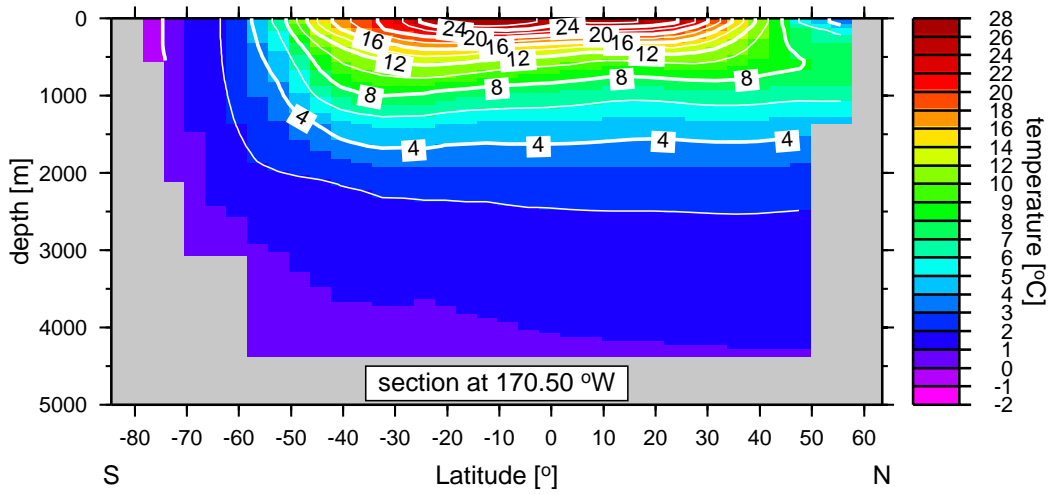


SO meltwater (-1 psu)

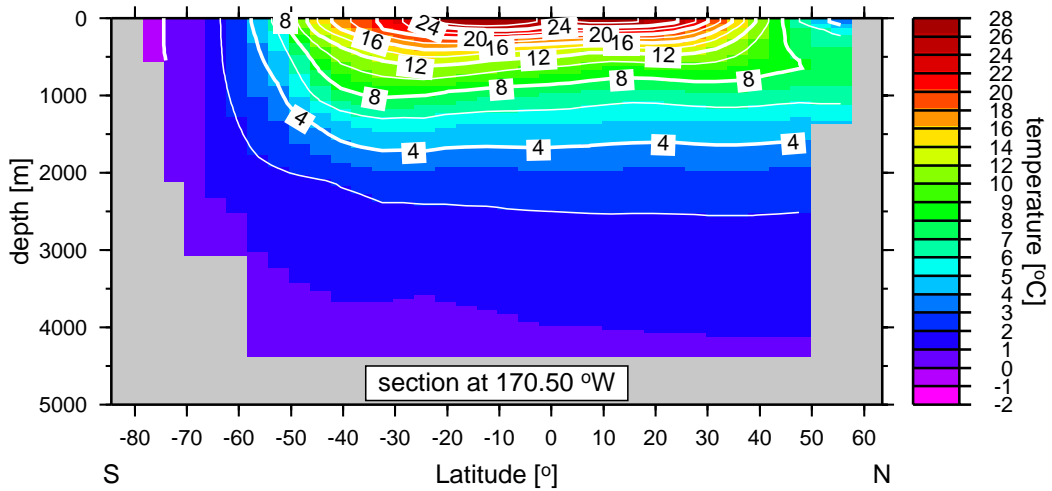


Temperature in Pacific Ocean

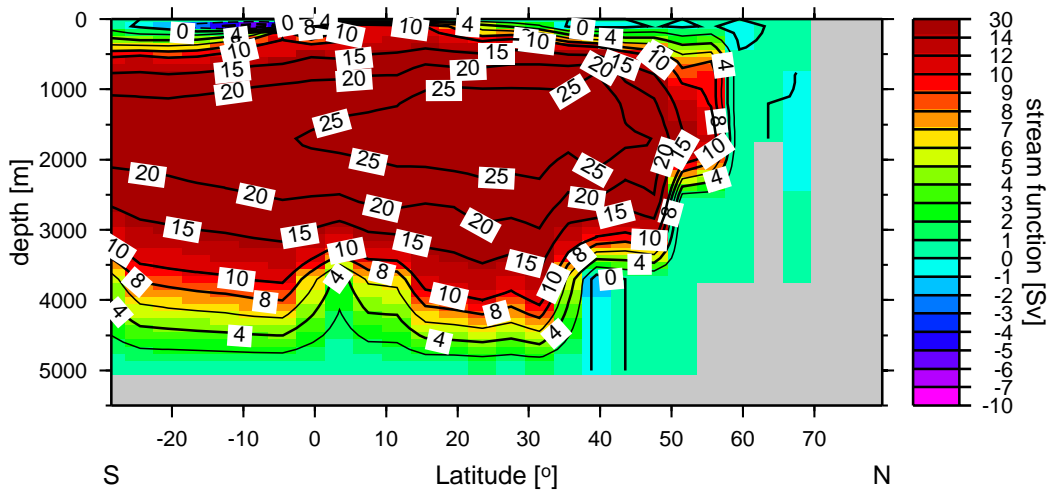
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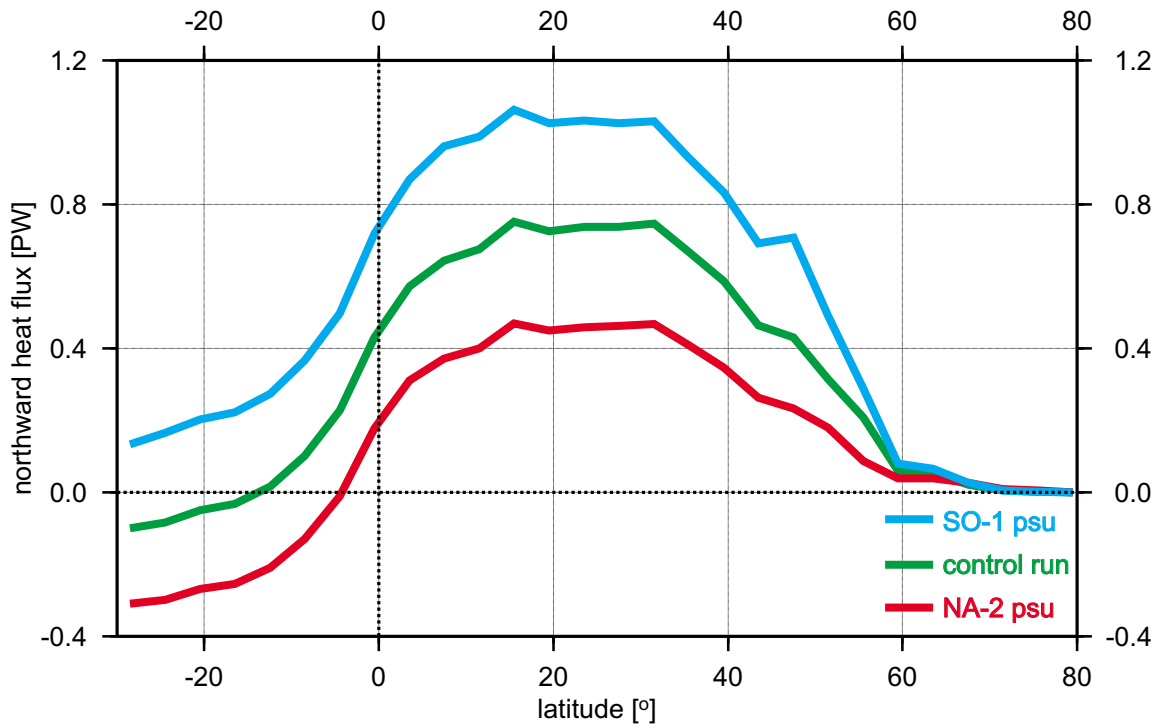
NA meltwater (-2 psu)



SO meltwater (-1psu)



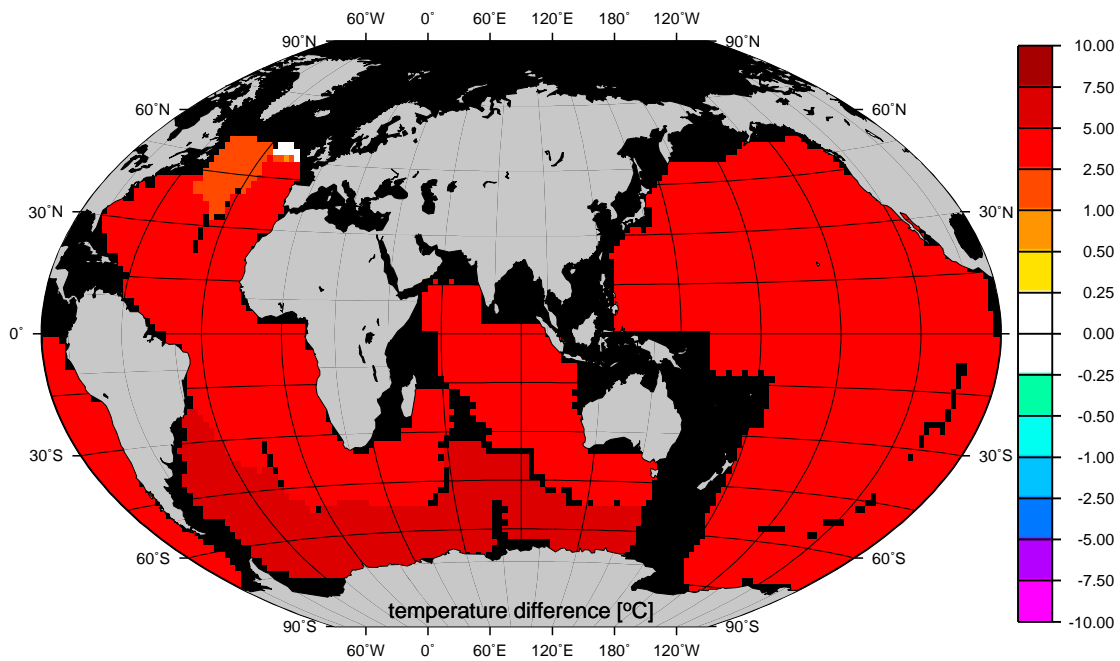
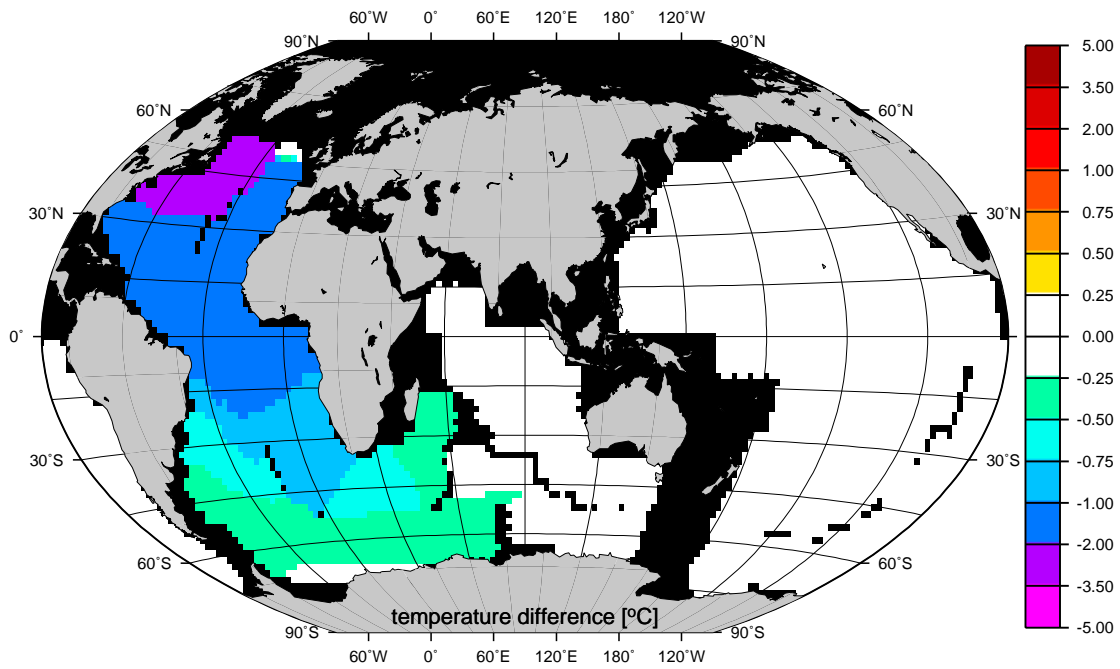
Northward heat transport in the Atlantic Ocean (present-day)



1 PW = 10^{15} W

Temperature differences at 3000 m depth

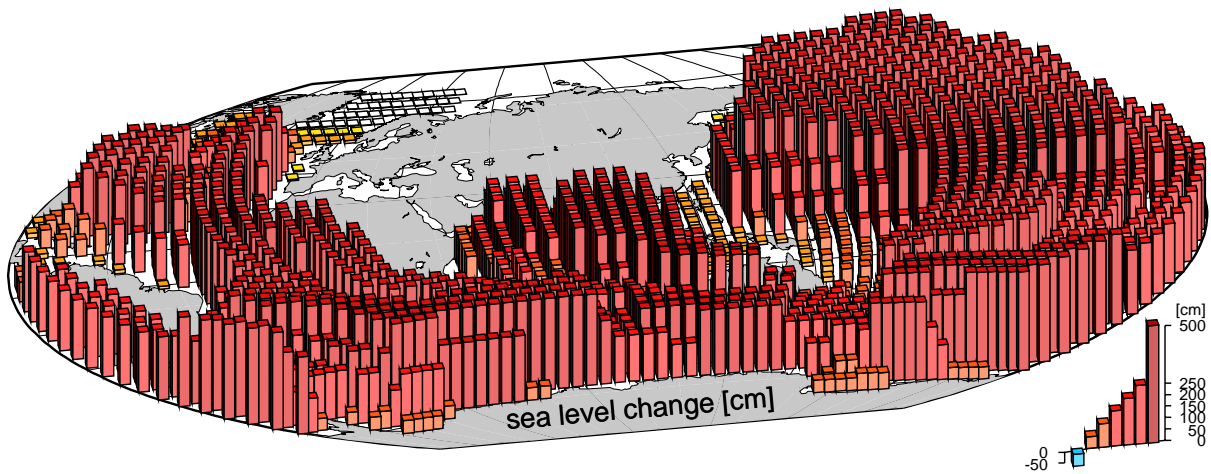
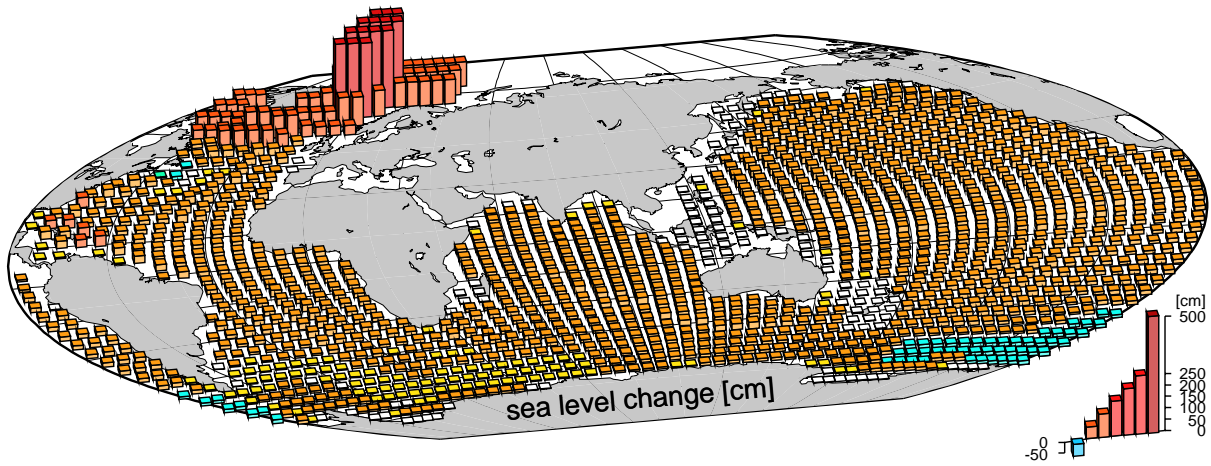
NA meltwater (-3 psu)



SO meltwater (-1 psu)

Sea level change

NA meltwater (-3 psu)



SO meltwater (-1 psu)

