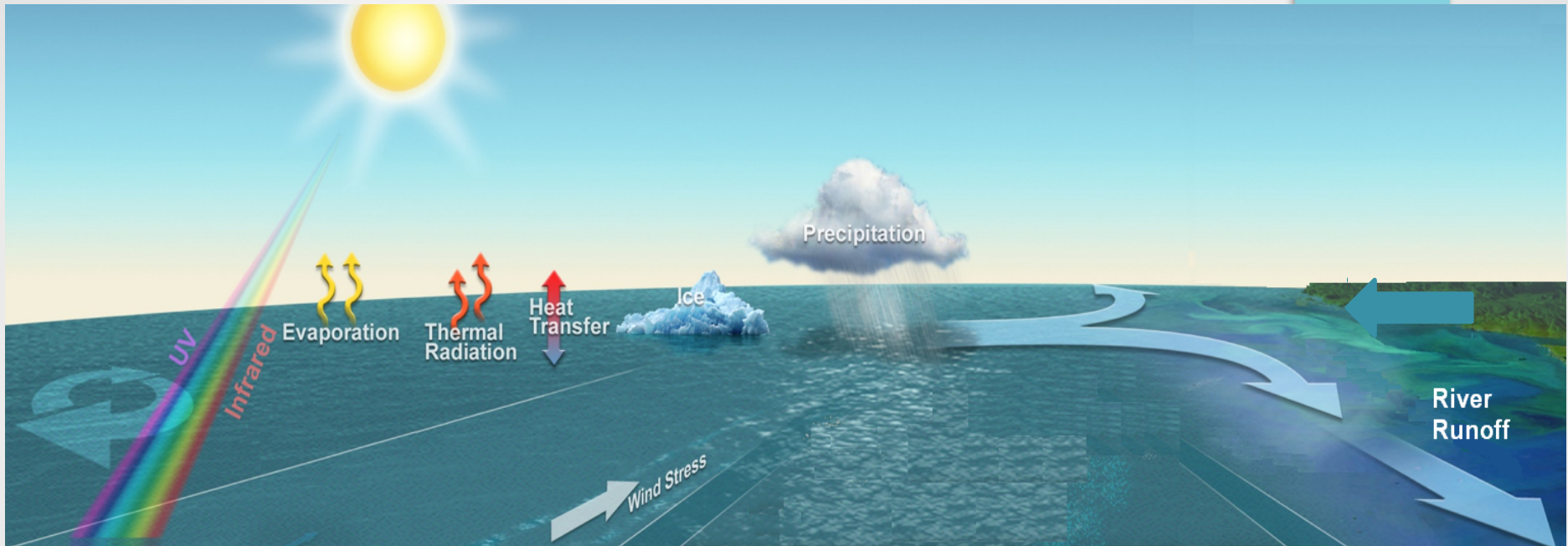


Simulation of the Arctic and North Atlantic ocean climatic circulation by the INM-IO model in the CORE-II framework

Ushakov K.V., Grankina T.B., Ibrayev R.A.

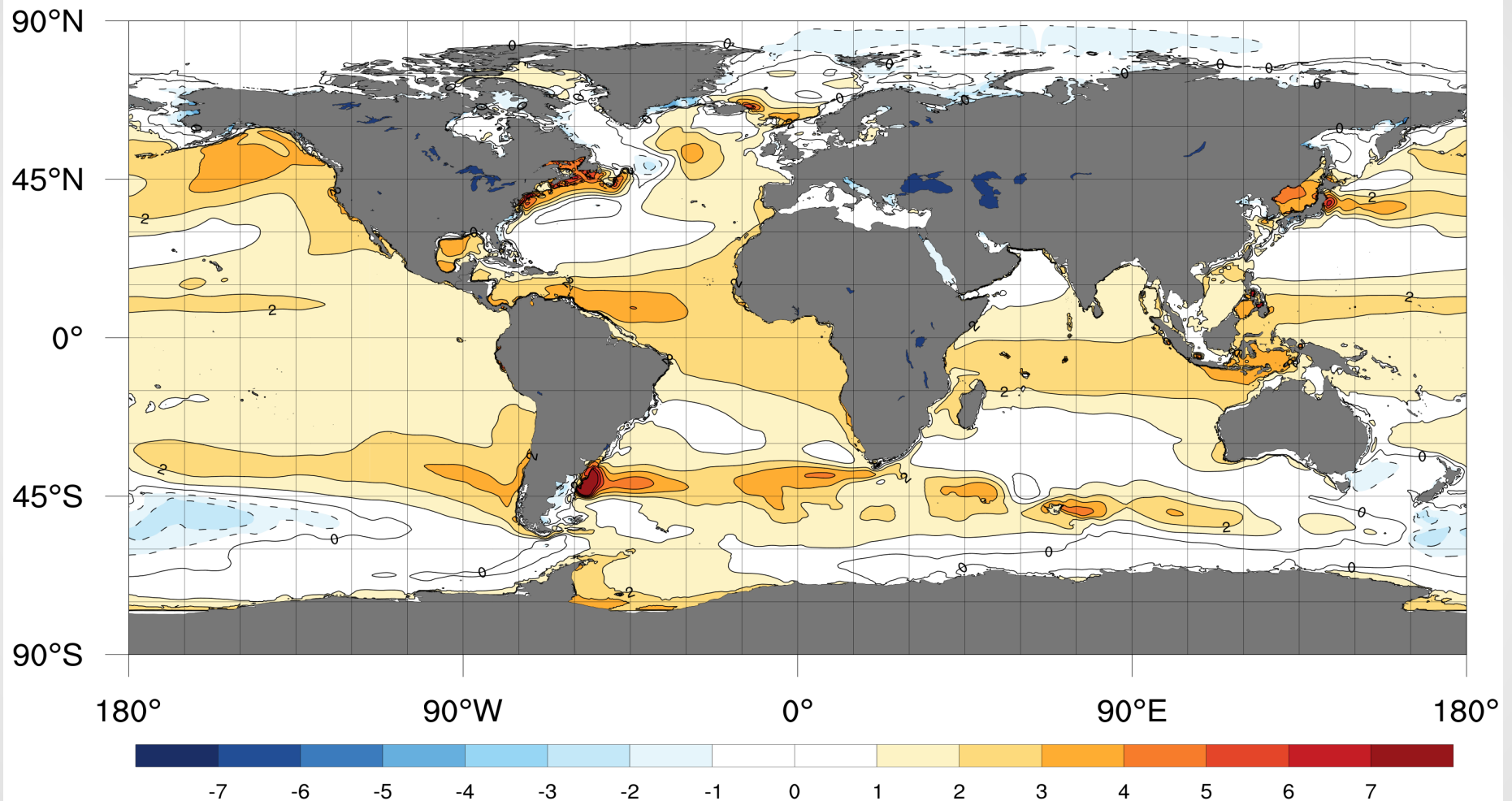
P.P. Shirshov Institute of Oceanology, RAS
Hydrometeorological Centre of Russia
Institute of Numerical Mathematics, RAS

CORE-II experimental protocol



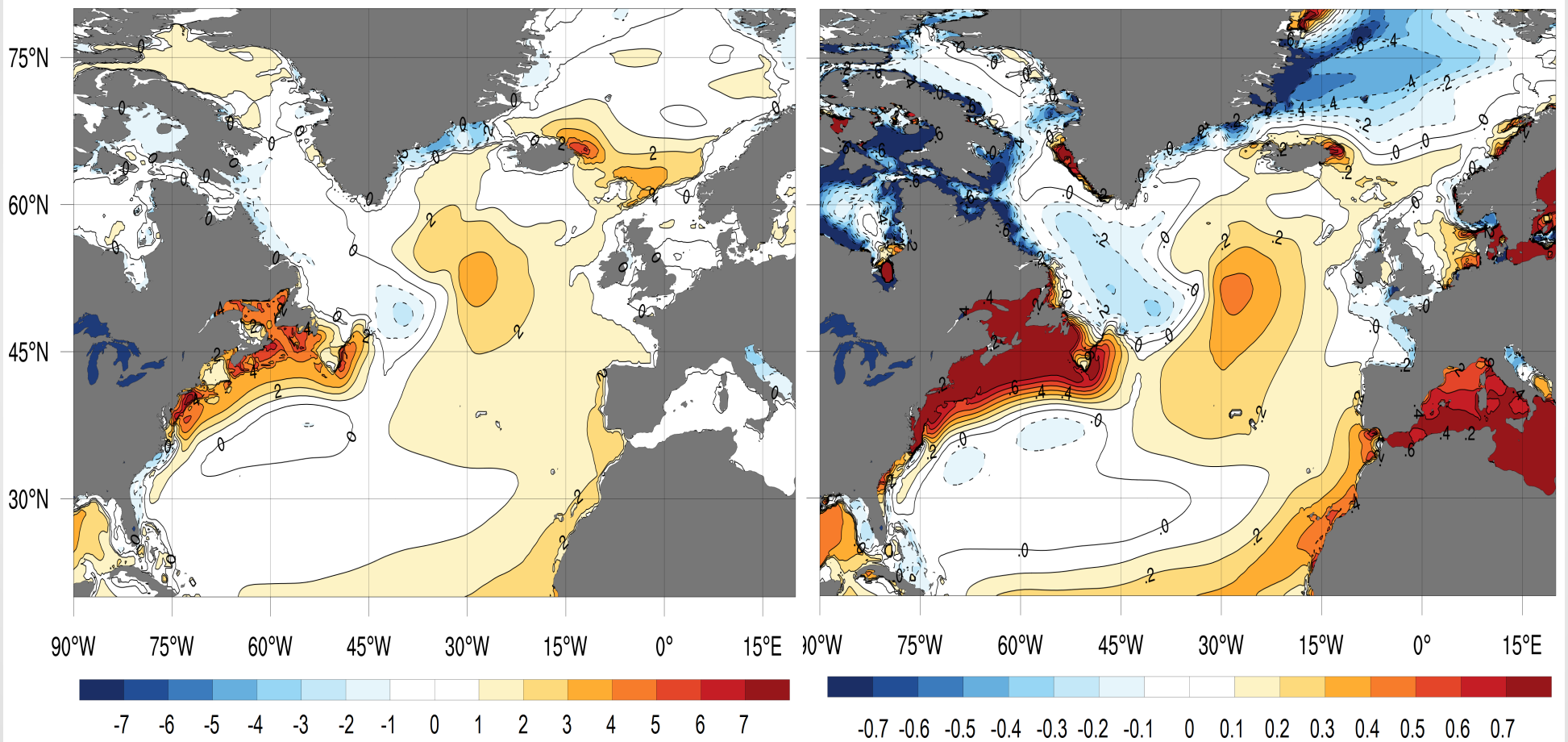
- Interannual atmospheric and radiative forcing for 1948-2007
- CCSM atmospheric boundary layer bulk formulae
- Climatological initial conditions - WOA09
- Weak sea surface salinity relaxation
- Total water flux normalization
- 300 years model integration (5 cycles)

20-year model climate



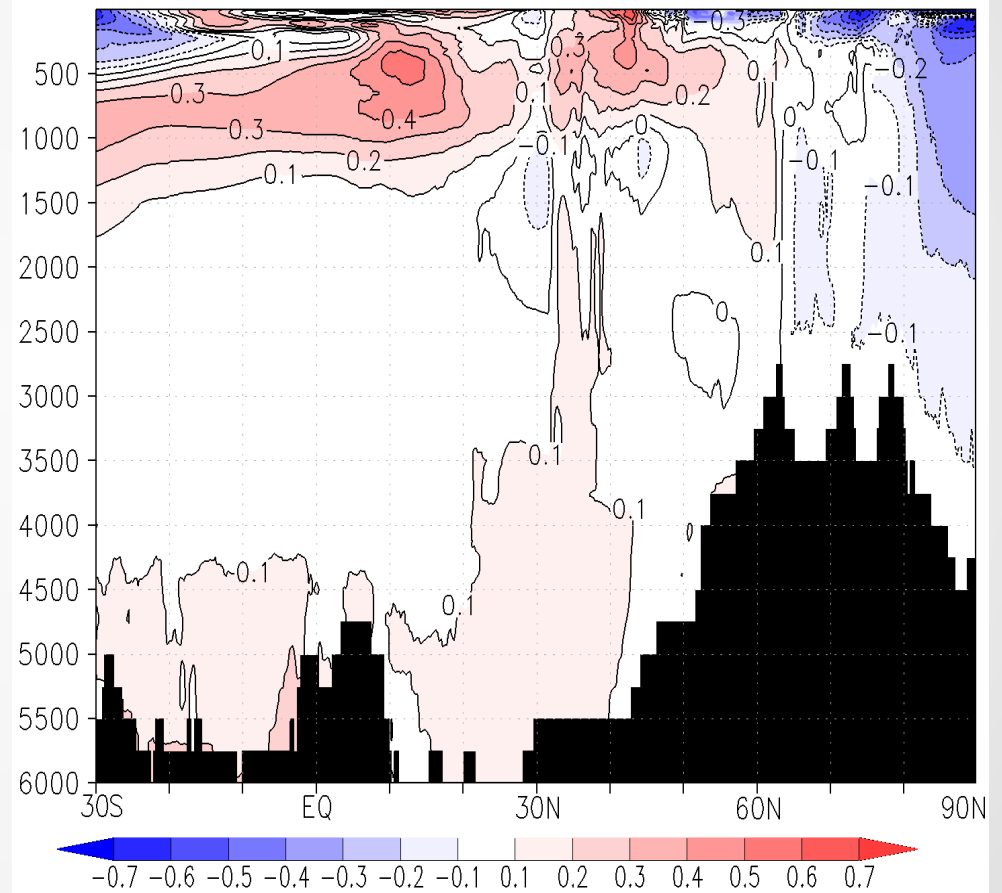
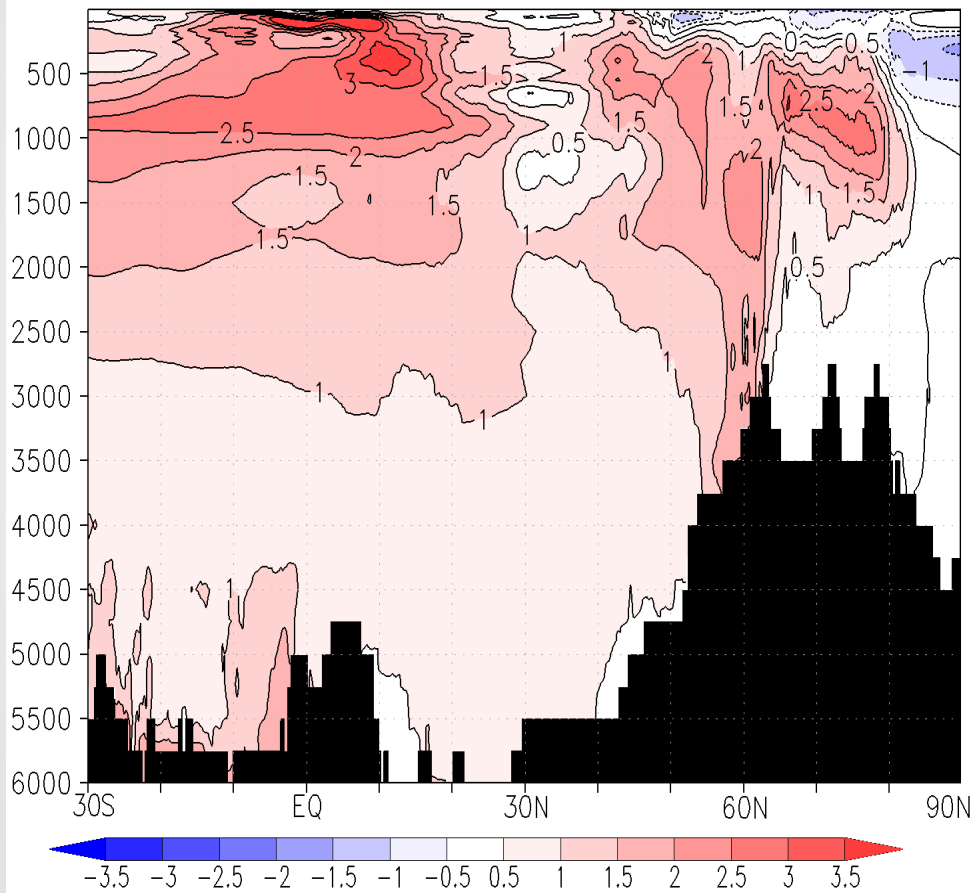
Upper 700-meter layer ocean temperature bias relative to WOA09 data

20-year model climate



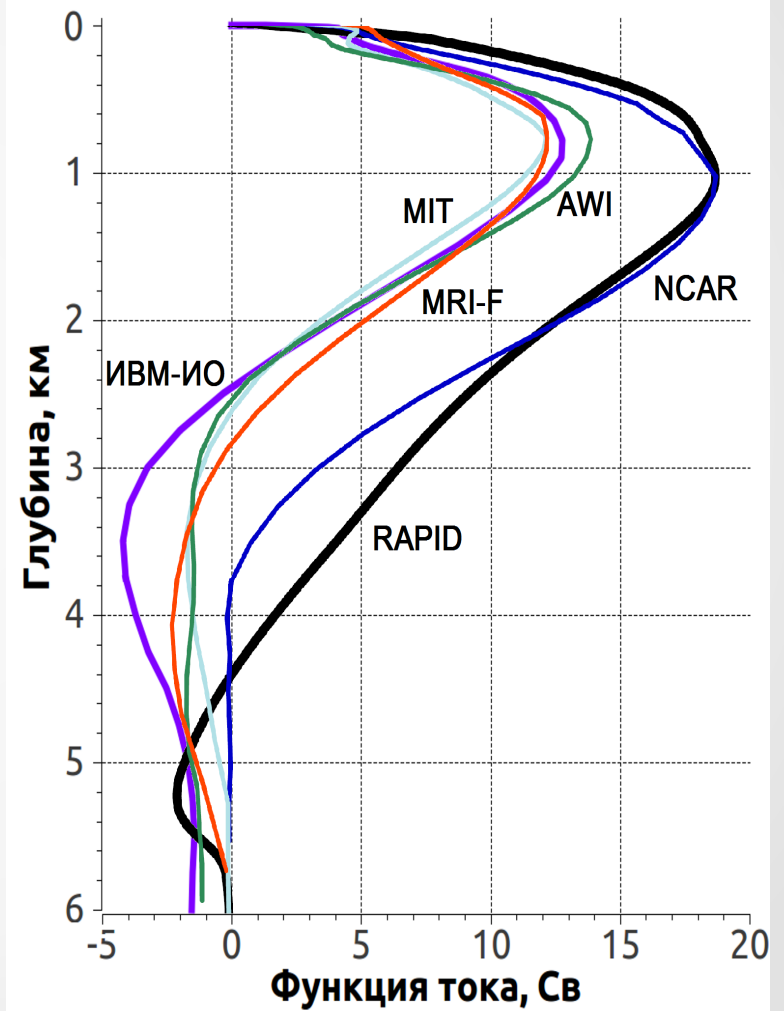
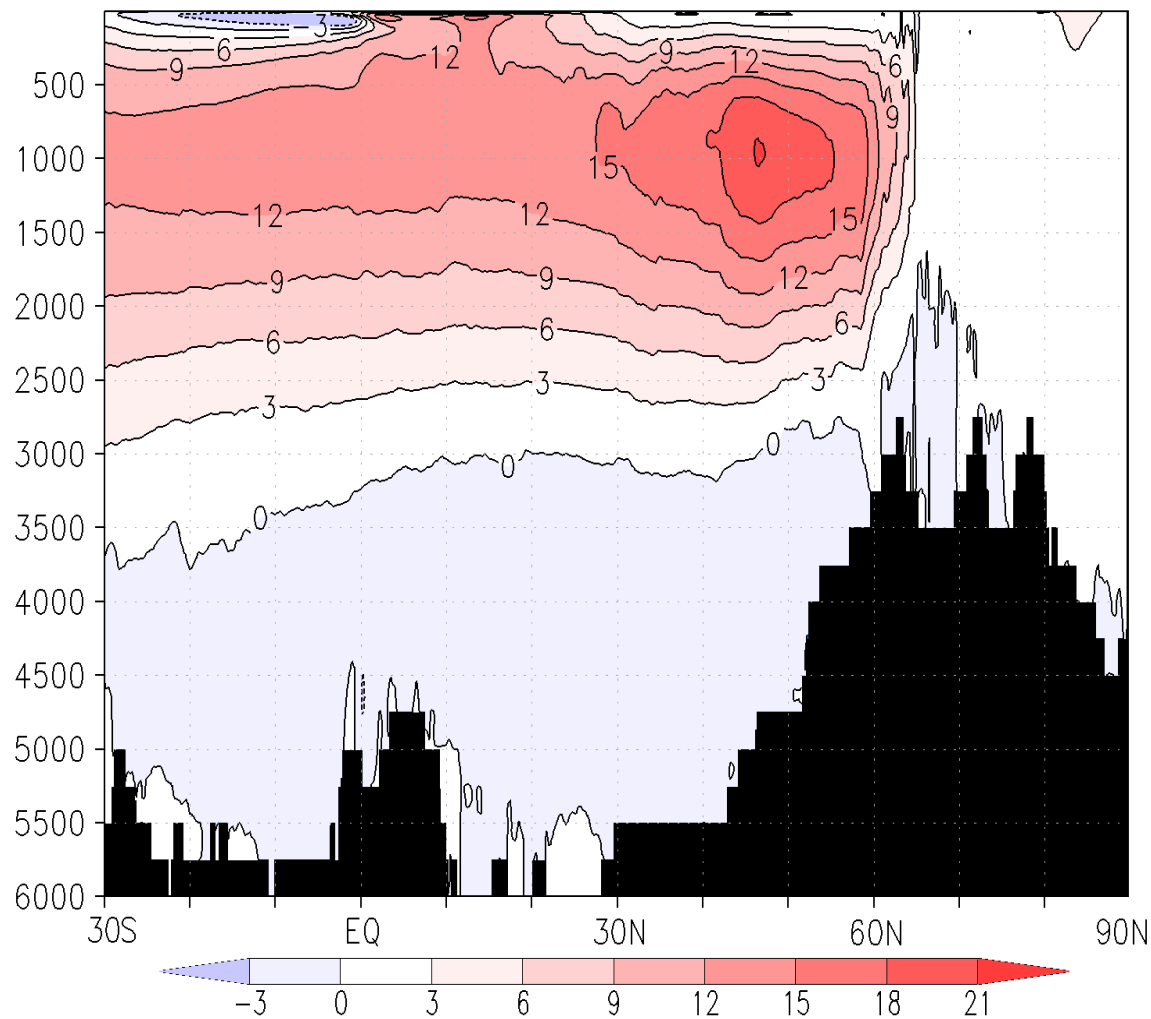
Upper 700-meter layer ocean T,S bias relative to WOA09 data

Zonal mean T,S biases



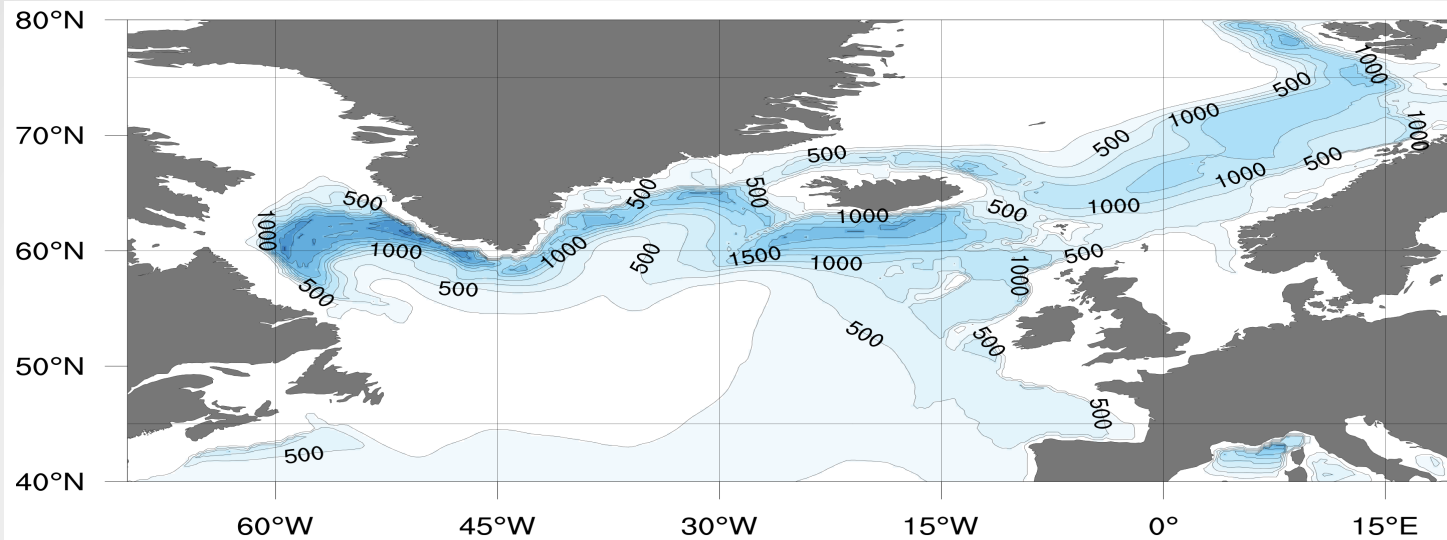
Zonal mean Atlantic and Arctic T,S biases relative to WOA09 data

Atlantic meridional overturning circulation

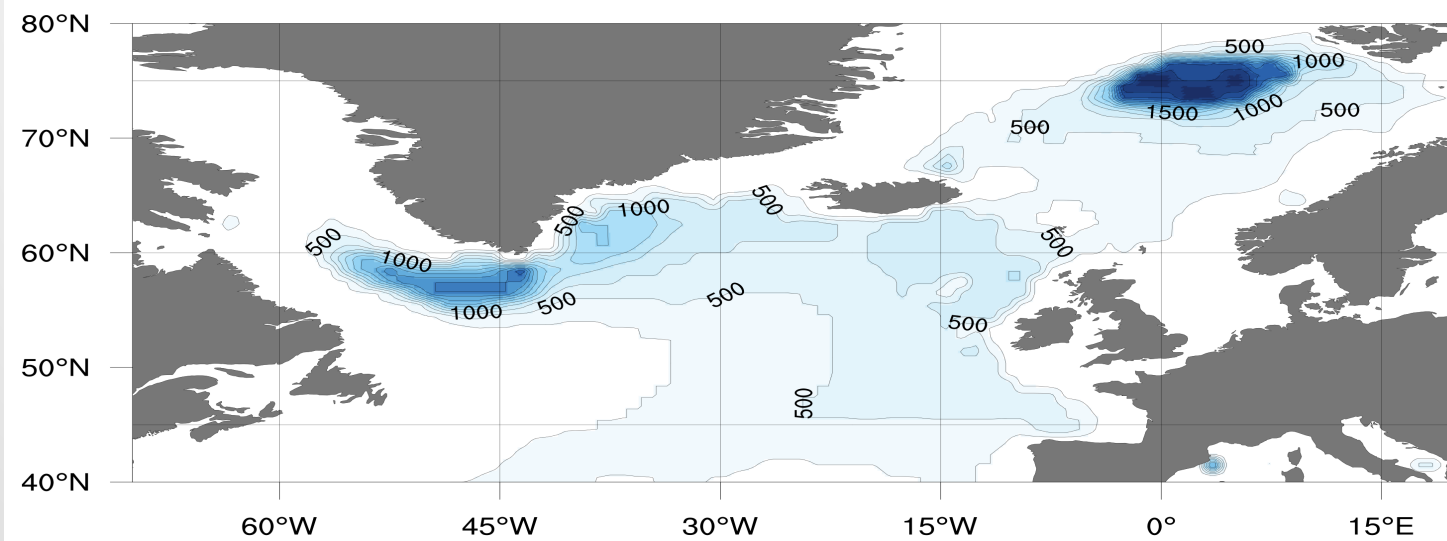


AMOC streamfunction (Sv): latitudinal distribution and profile at 26.5N

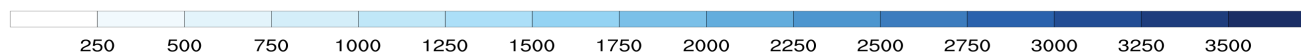
Mixed layer depth



model



WOA09





Thank you for your attention!