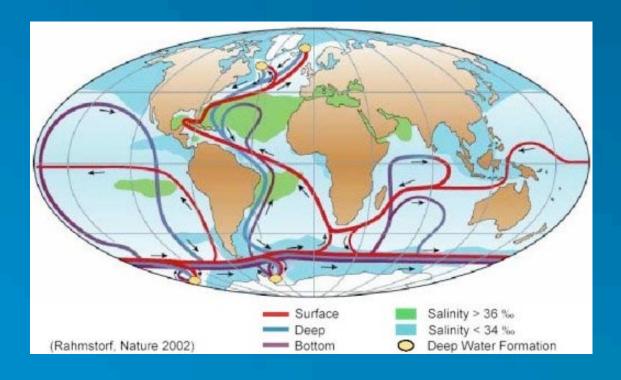
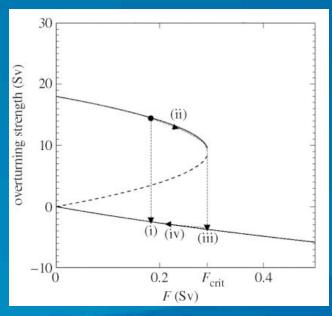
Abrupt Change of the Thermohaline Circulation

NCAR



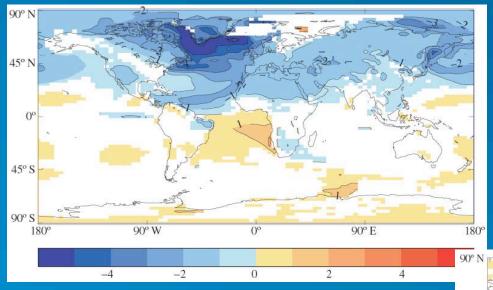
Idealized map of pathways and transports for NADW formation



Simple "Stommel" model of THC thresholds

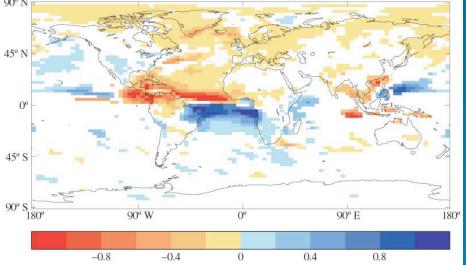
Response of a climate model to THC shutdown

NCAR

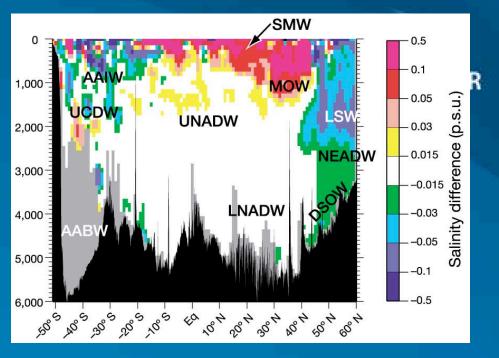


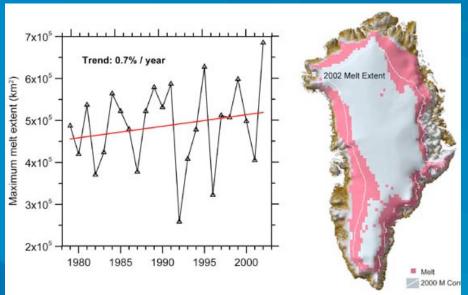
Surface temperature change in third decade

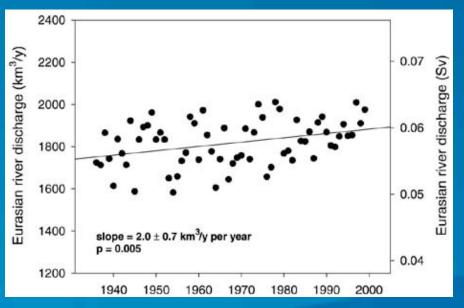
Precipitation-minus-evaporation change in third decade



What is happening in the North Atlantic and Arctic at present?



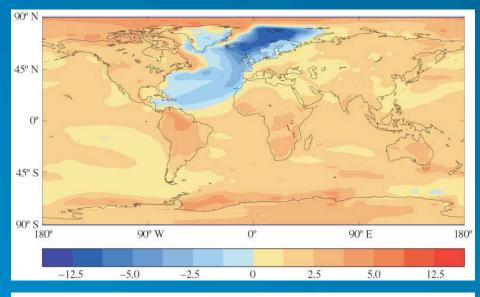


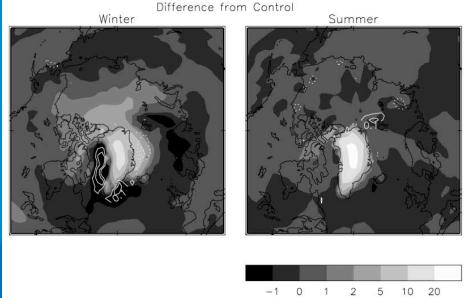


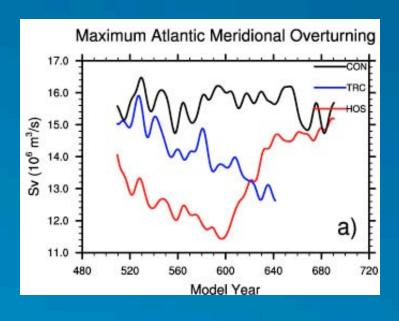
ARCSS Synthesis Retreat, 8-14 August 2004, Lake Tahoe

Response of a climate models to future warming

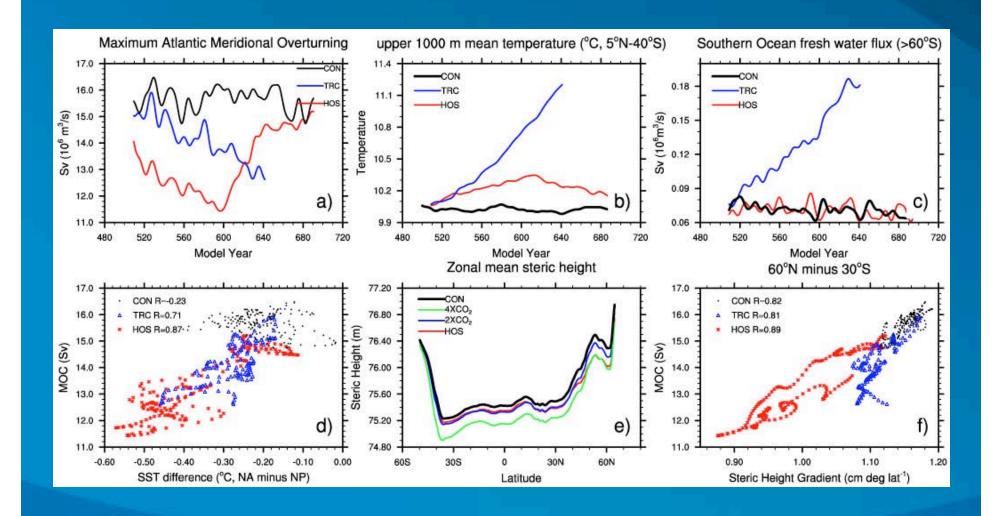
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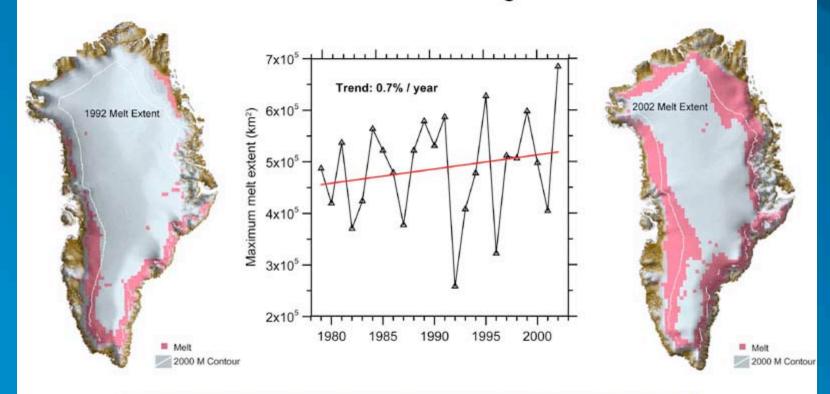


Response of MOC to transient climate change is a result of several competing processes



CAR

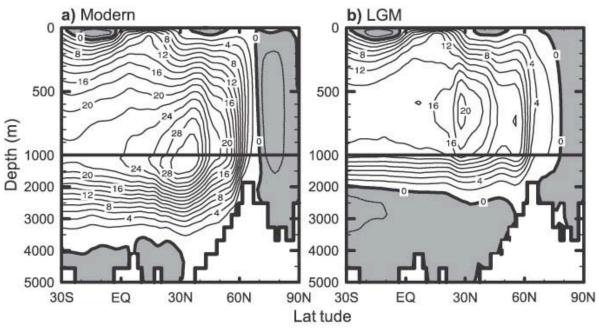
Response of the Greenland Ice Sheet to Climatic Forcing

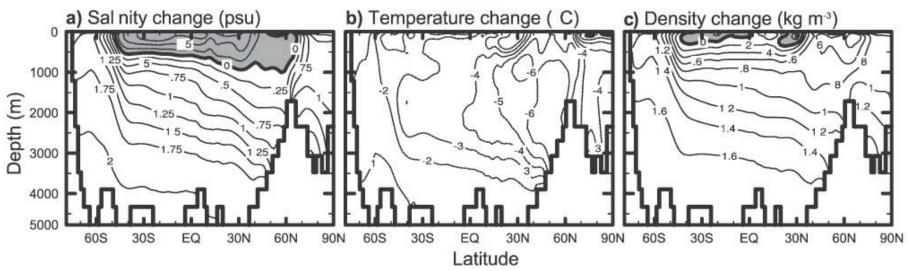




Greenland ice sheet melt area increased on average by 16% from 1979 to 2002. The smallest melt extent was observed after the Mt. Pinatubo eruption in 1992

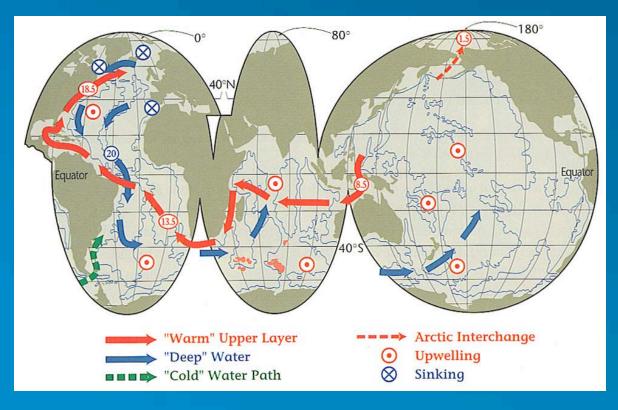




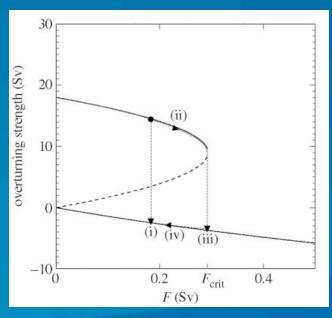


Abrupt Change of the Thermohaline Circulation

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Idealized map of pathways and transports for NADW formation



Simple "Stommel" model of THC thresholds