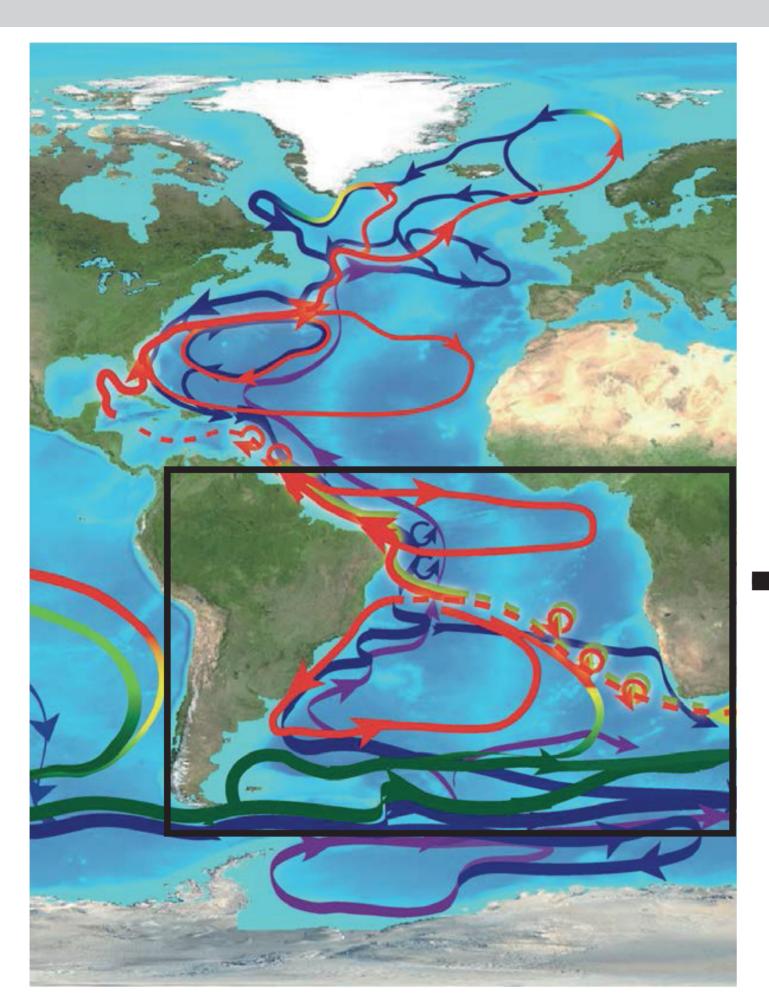
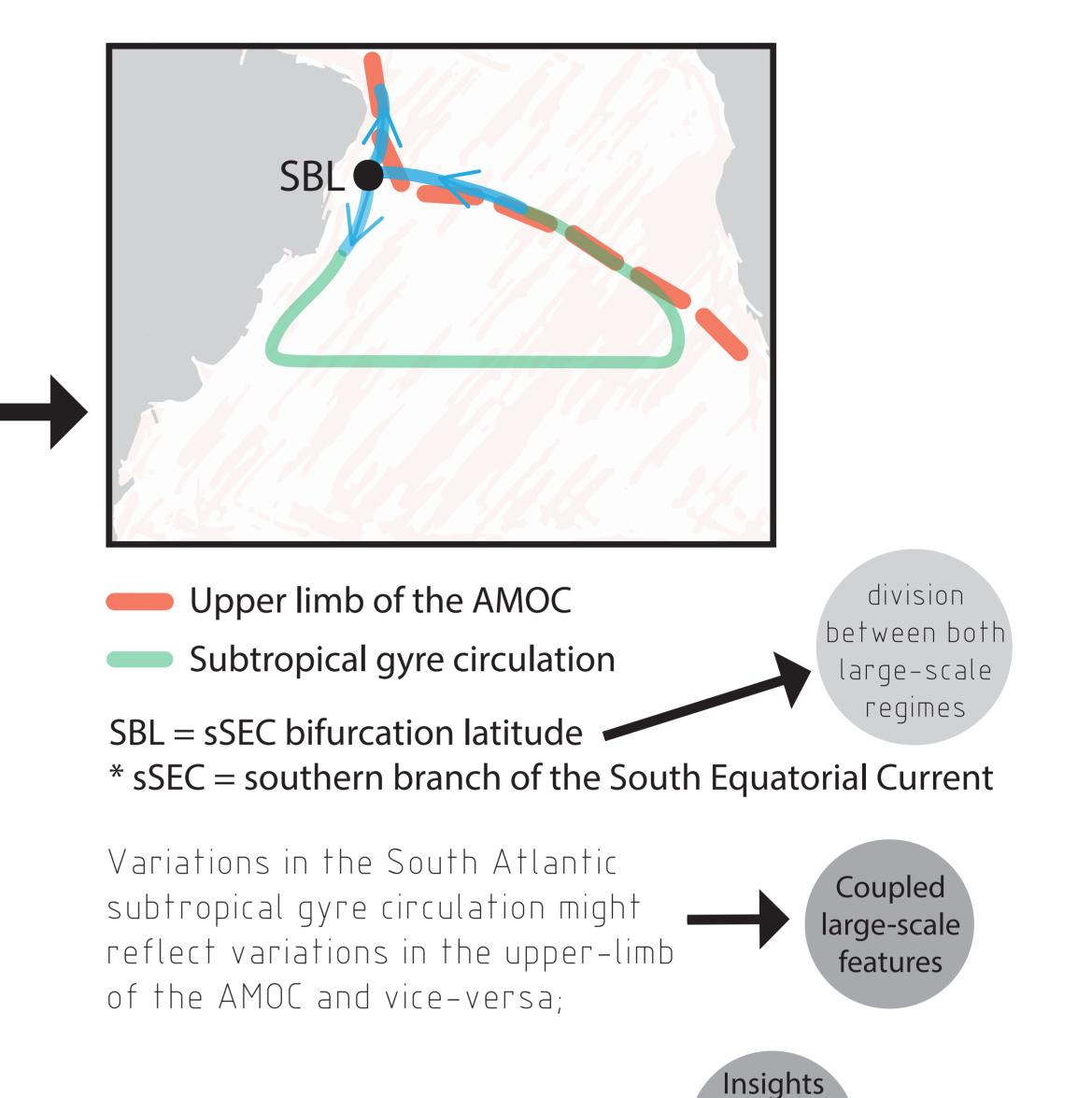
Past to future South Atlantic Meridional Overturning Circulation: pathways and low-frequency variability



This study investigates the pathways which compose the upper limb of the Meridional Overturning Circulation in the South Atlantic sector and its connection and interplay with the subtropical gyre circulation.

The southern branch of the South Equatorial Current (sSEC) flows westward through the South Atlantic basin until it meets the Brazilian coast and bifurcates.

The sSEC bifurcation is the focal point which marks the division between the continuity of the AMOC upper limb and the closure of the subtropical gyre



Model simulation results:
The Community Earth System Model – Large Ensemble project

(CESM-LEns) Kay et al. (2015) > 33 ensemble members with the full-set of external forcings

1920-2005 = historical simulations (postindustrial era) 2006-2100 = climate change simulations (RCP8.5)

on the

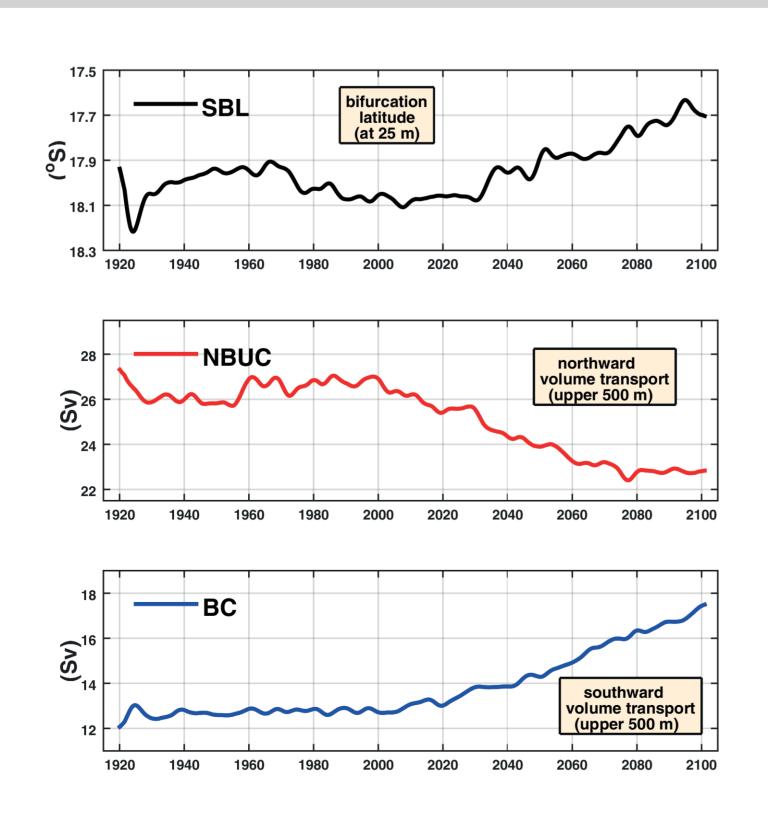
upstream

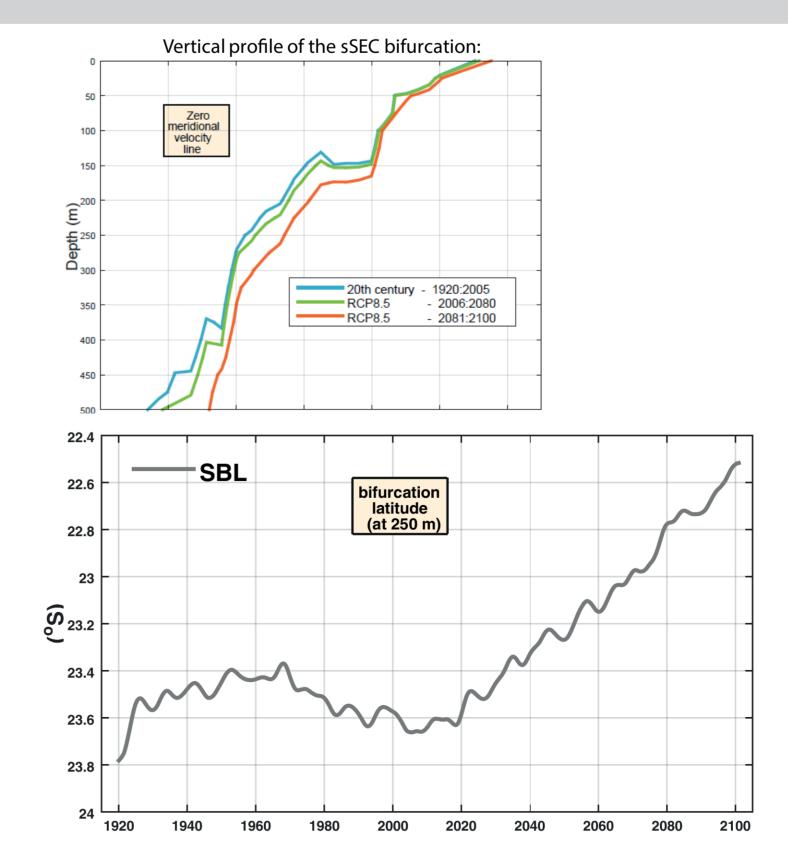
flow

How much

waters veering

north/southward??





Subtropical gyre circulation

sSEC bifurcation latitude •





