

SAMOC

South Atlantic Meridional Overturning Circulation

2AMOC

Deep water formation by convection in the higher latitudes of the North Atlantic is a crucial mechanism for the maintenance of the Global Thermohaline Circulation.

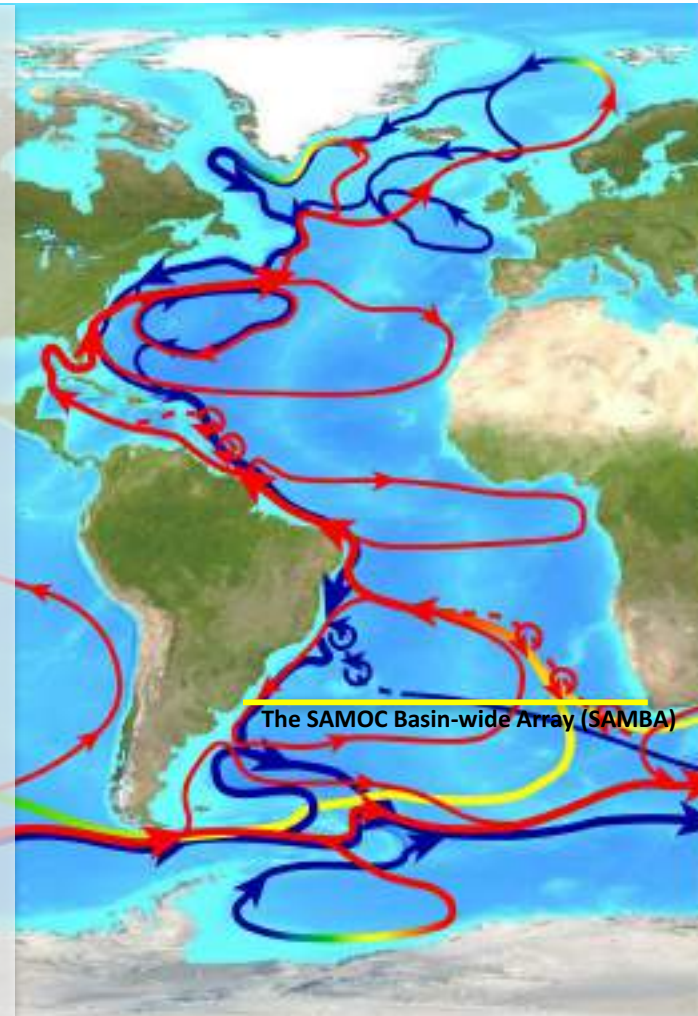
The southward flow of the cold North Atlantic Deep Water requires a northward transport of warmer waters in the upper layers.

Rick Lumpkin (NOAA/AOML)

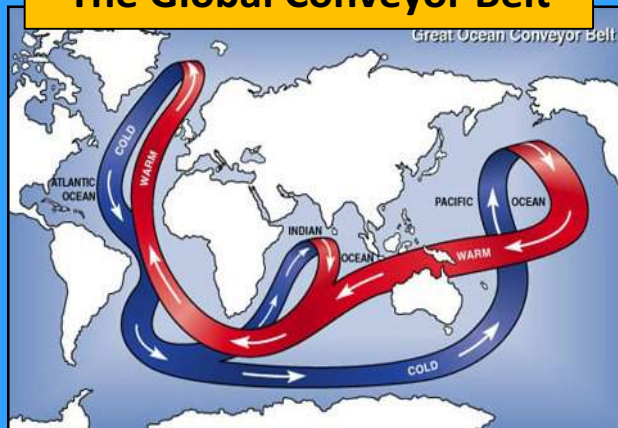
The Atlantic meridional overturning circulation (AMOC) is responsible for a net northward heat transport of about 1.3 petawatts across the equator.

1.3 petawatts is equal to 1,300,000,000,000,000 Watts, or the equivalent to about one thousand big nuclear plants.

Small changes in the AMOC heat transport can lead to drastic climate changes, with considerable impacts over Europe, the Americas and Africa.



The Global Conveyor Belt



The International SAMOC Executive Committee:

- A. Piola (Argentina)
- E. Campos (Brazil)
- I. Ansorge (S. Africa)
- S. Speich (France)
- S. Garzoli (U.S.A.)
- C. Meinen (U.S.A.)

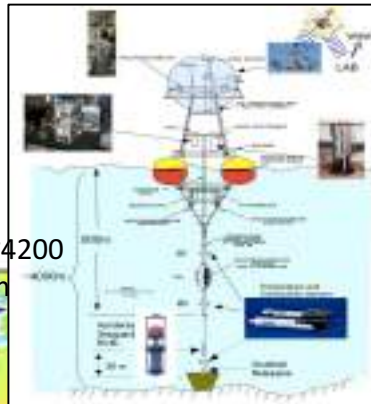
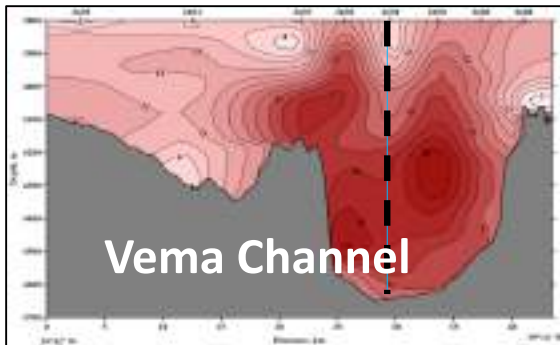
www.aoml.noaa.gov/phod/SAMOC_international



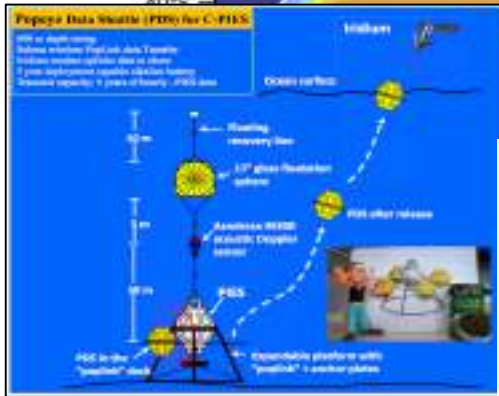
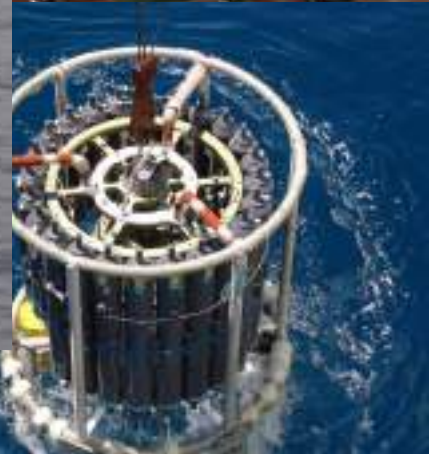
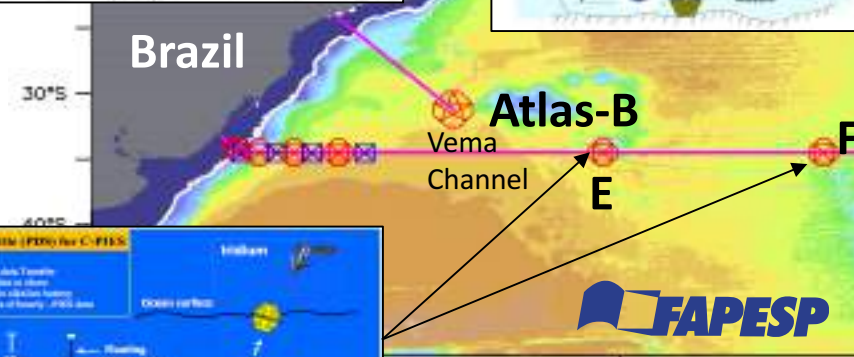
SAMOC

South Atlantic Meridional Overturning Circulation

An International initiative to understand and monitor the role of the South Atlantic on climate

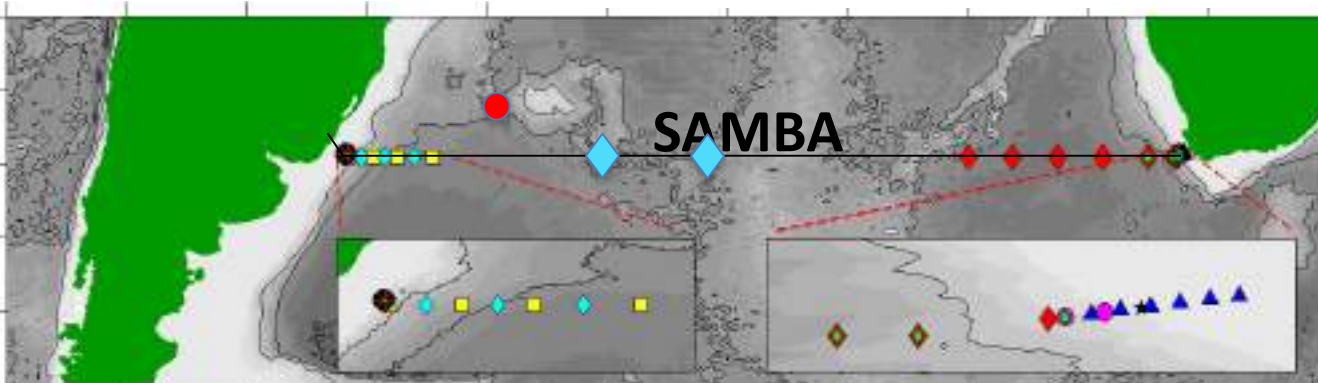


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The SAMBAR Project
FUNDED by FAPESP and lead by IOUSP
(Dec 2017 – Nov 2022)

Goal: Enhancement of the SAMOC Basin-Wide Array (SAMBA) with the addition of inverted echosounders near the mid Atlantic Ridge and a moored buoy system (Atlas-B) in the Vema Channel.



The research will include ship-based observations, remote sensing and high resolution numerical modeling.