The circulation in the Northeastern Tropical Atlantic : saisonnal variability and dynamics of the west african poleward boundary current (WABC)

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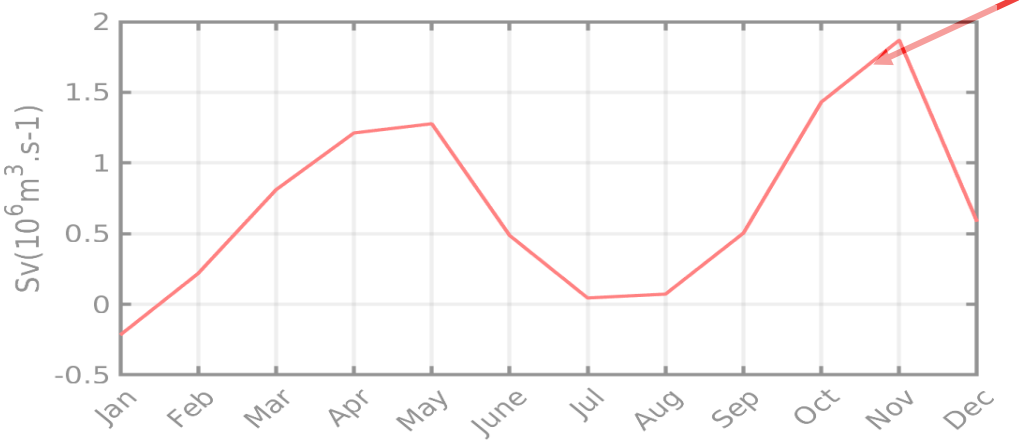
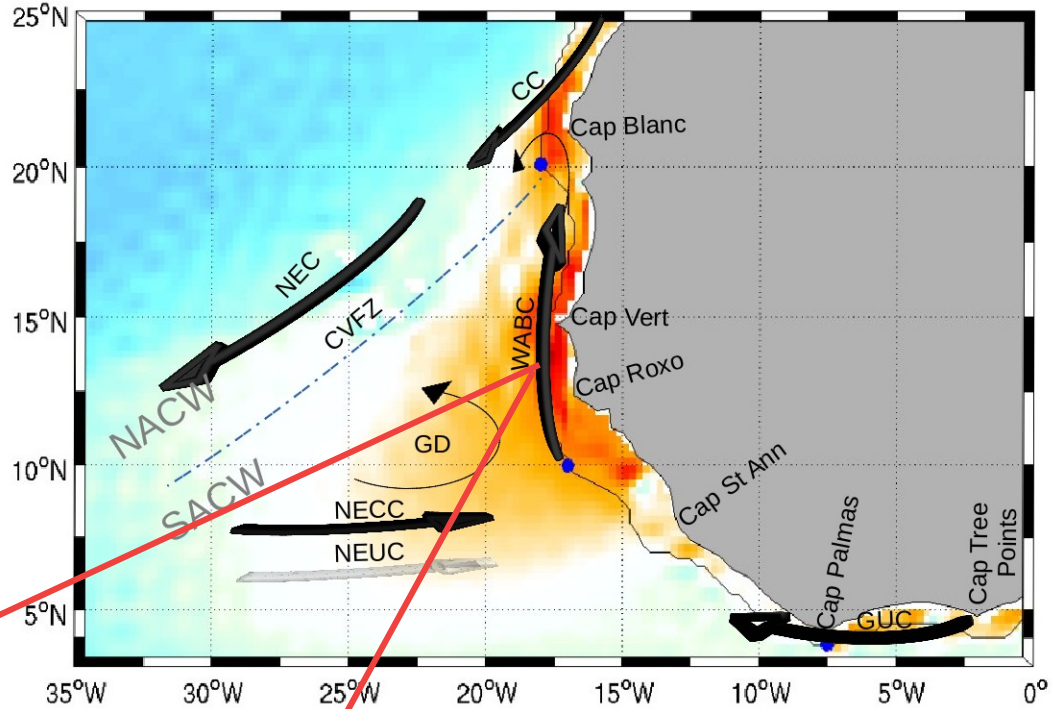
The circulation in the Northeastern Tropical Atlantic : **seasonal variability** and dynamics of the west african poleward boundary current (WABC)

The west african sea bord is characterized by the presence of a relatively swift current the West African Boundary Current (WABC) located along the continental slope.

The WABC is an important contributor to the northward transport and feed the coastal upwelling in the west african seaboard

The WABC present two peaks of transport over the year : a first in April-May and a second in October-November





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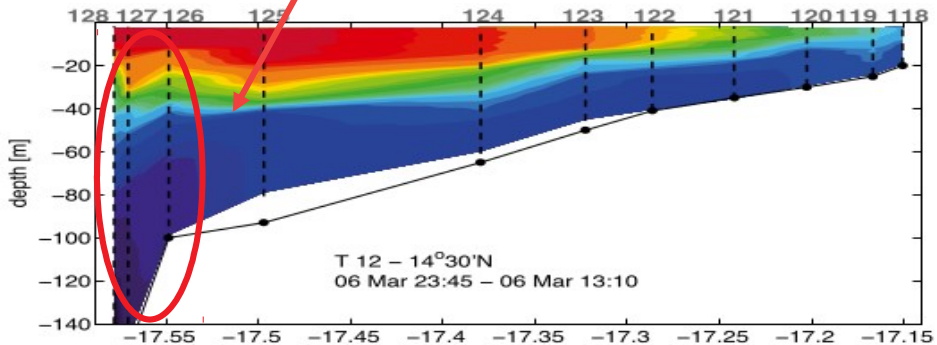

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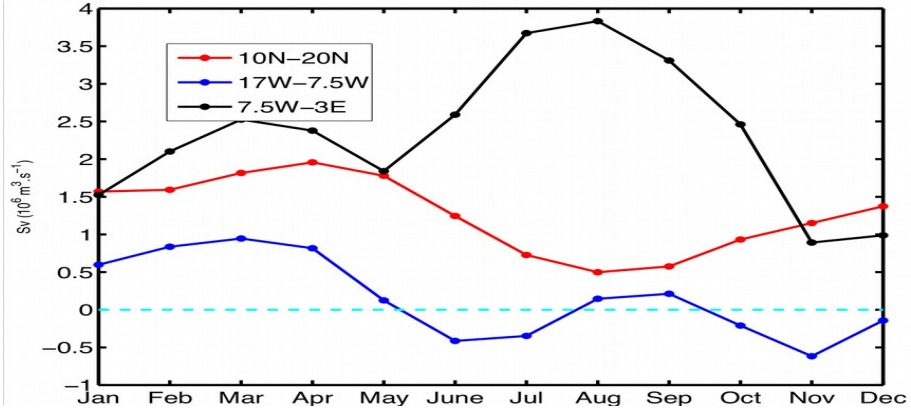
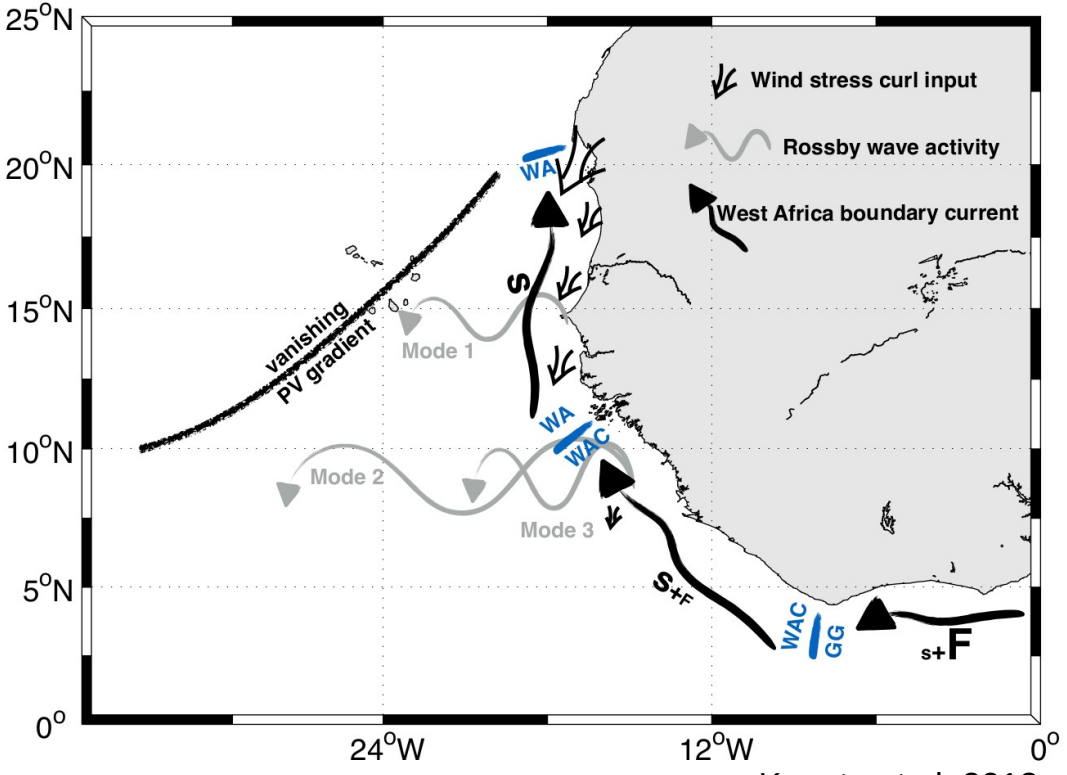
The existence of WABC results from activity of coastal trapped waves generated by wind forcing.

The first peak is explained by local wind changes (west african seaboard) while the second peak is mainly due by a remote forcing (changes wind in the Gulf of Guinea).

The WABC is subjected to scattering and gives rise to Rossby wave activity hundreds of kilometers offshore.

$$IU = \frac{1}{\rho_0 f}\int_a^b (\tau_x \sin\alpha - \tau_y \cos\alpha) ds$$





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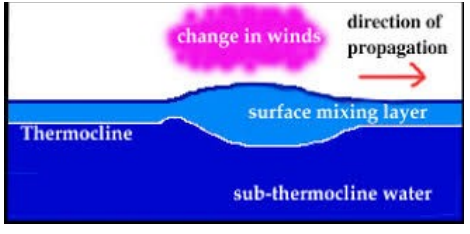

Post-doc research :

Heat Waves Along the West African Seaboard: Role of the West African Boundary Current in Present and Future Conditions

The WABC is an important contributor to the northward transport of warm equatorial water. This is particularly intense during October november.

Hyphotesis :

The WABC is plausibly key determinants of the local climate for a long stretch of WA shore, possibly from Guinea-Bissau to northern Mauritania.

This project aim to :

understanding the role of WABC on West African Seaboard weather particularly on extreme weather .