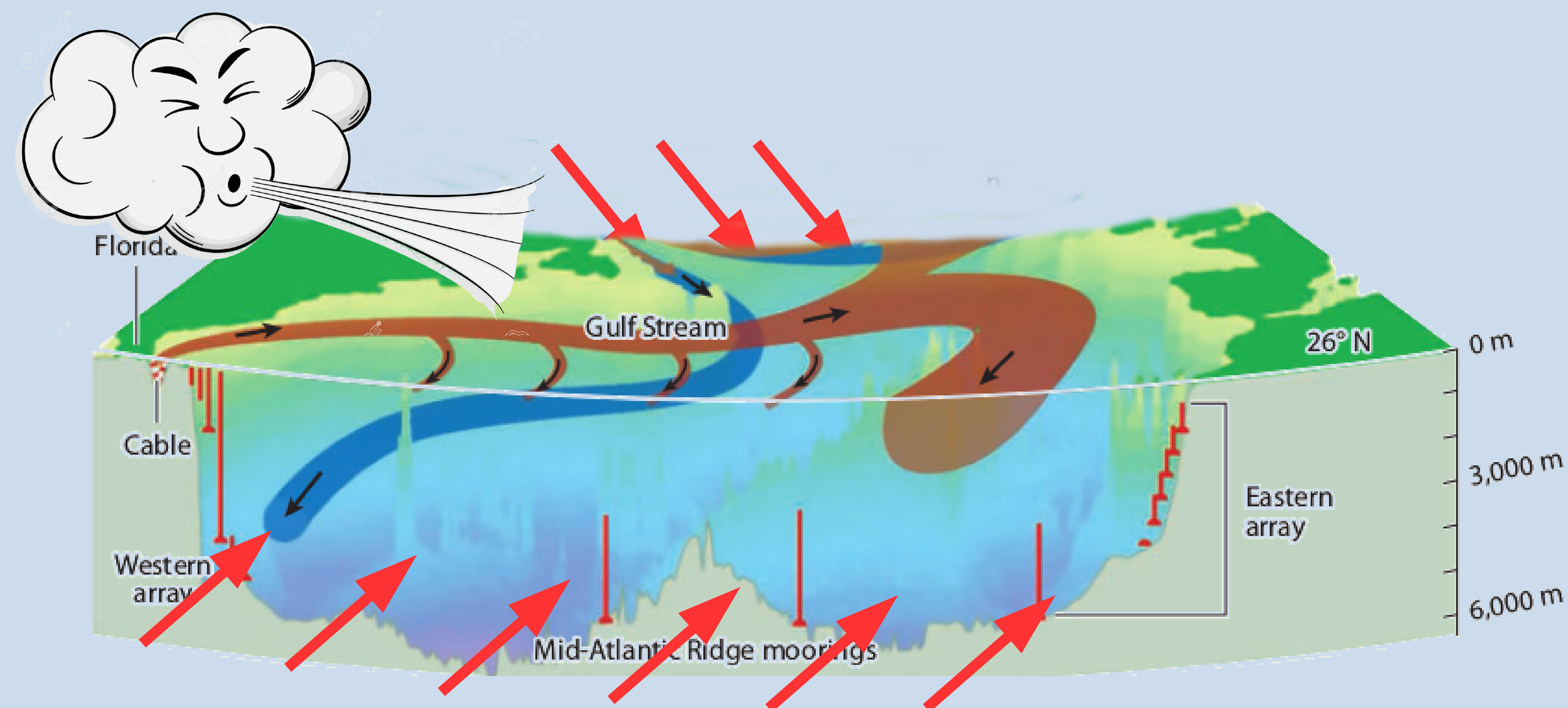


## OBJECTIVE

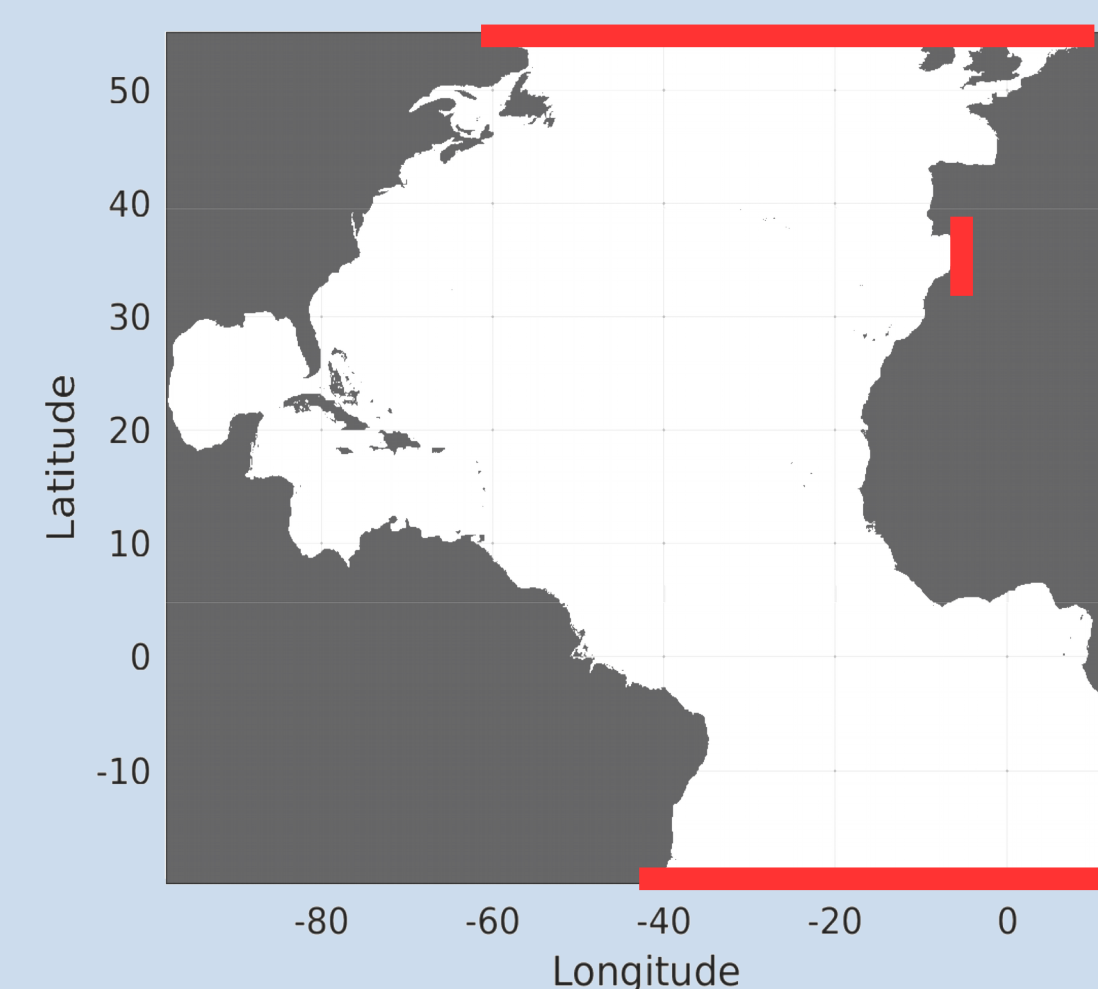
Categorize the **North Atlantic** low frequency variability as **local** or **remote**



## METHOD

### 1/ North Atlantic regional modeling

- 1/12° oceanic configuration of the MITgcm
- CheapAML (Atmospheric boundary layer)
- Atmospheric forcing: Drakkar Forcing Set v4.4
- Boundary conditions: ORCA12.L46-MJM88 global run
- 50-yr long simulations

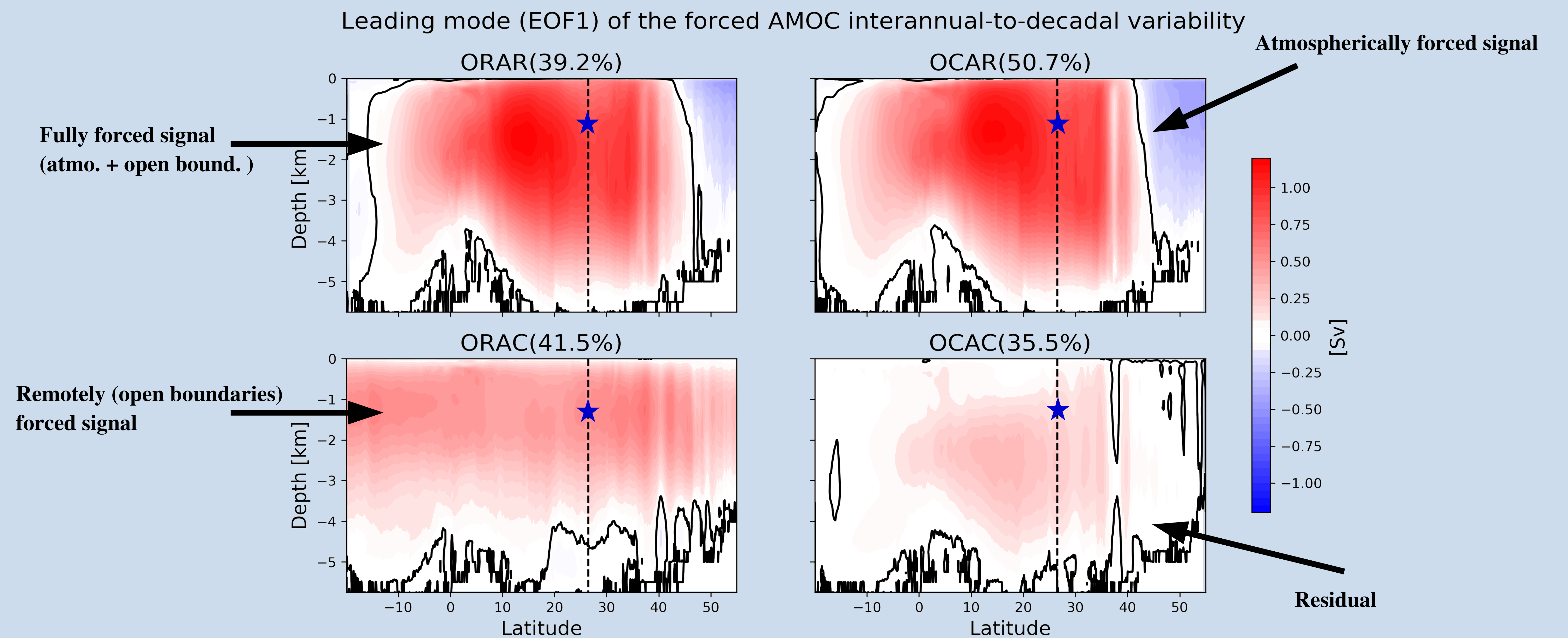


### 2/ Four sets of experiments

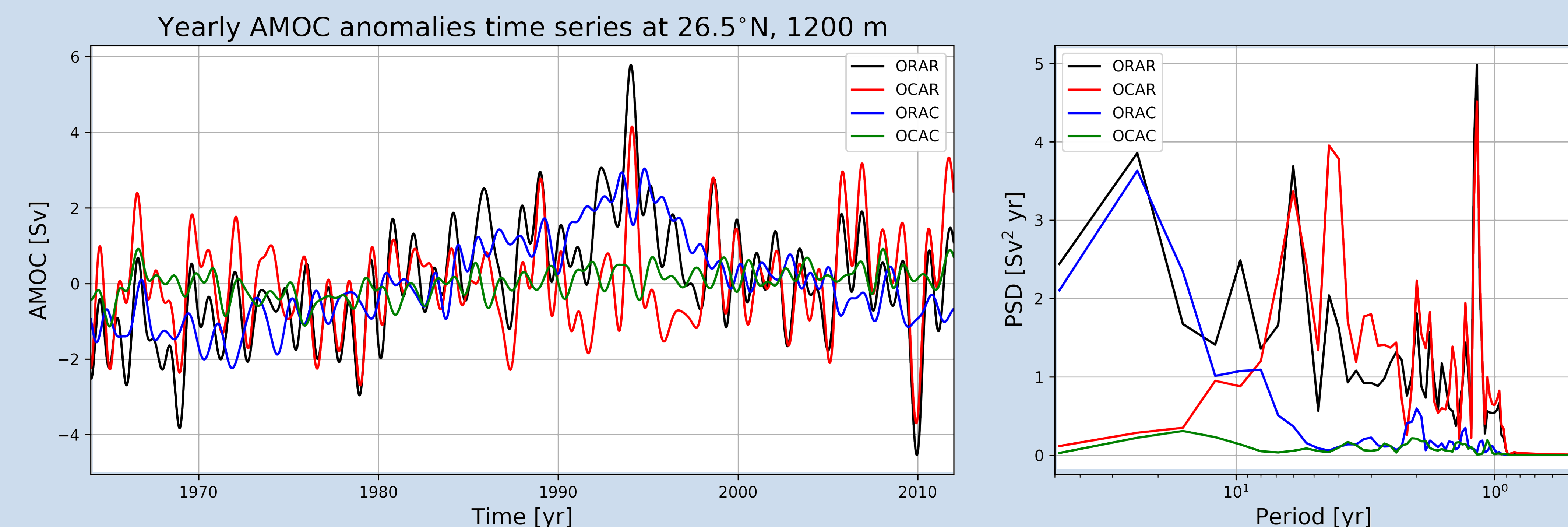
- Permutation of surface and boundary forcing as fully varying or yearly repeated
- Normal year: August 2003 – July 2004
- 12-members ensembles
  - filter out intrinsic variability through **ensemble averaging**

		Atmosphere	
		Normal year	Fully Varying
Open boundaries	Climatological	OCAC	OCAR
	Fully Varying	ORAC	ORAR

## RESULTS



★ RAPID-MOCHA-WBTS location:



## SUMMARY

- Predominance of an atmospherically forced mode
- Time scale separation of the AMOC low frequency **forced variability**:
  - **Interannual** time scales (2-10 years) → **Locally** by the atmosphere
  - **Multidecadal** time scales (10-30 years) → **Remotely** through boundaries