



## **IMPACT OF ROSSBY WAVES ON SURFACE CHLOROPHYLL PATTERNS IN THE NORTH ATLANTIC OCEAN**

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In situ measurements (Price and Magaard, 1986 ; Spall, 1992) and sea surface height anomaly measured by Topex/Poseidon and ERS2 (Cromwell, 2001 ; Cipollini et al. , 1997, 1998) have allowed to detect baroclinic Rossby waves in the North Atlantic and to study their features (wavelength, group and phase speed and period). Enhancement of surface chlorophyll-a by Rossby waves has been recently detected by several authors in ocean color data (Uz et al., 2001 ; Cipollini et al., 2001; Charria et al., 2002).

The monthly SeaWiFS data and combined TOPEX/ERS2 data over the 5 years 1998-2002 are used. Detecting this wave in altimetry and ocean color data is difficult due to the weak signal compared to the seasonal cycle and the mesoscale activity. A spatial filter, based on a wavelet analysis, has been used to highlight this wave in the North Atlantic.

We will discuss, in space and time, the link between Rossby waves and mesoscale activity as well as the interannuality of these waves, both on the physical signal (sea surface anomaly) and the biological signal (surface chlorophyll). The zonal "waveguide" at 34°N will be specially investigated.