SOME FEATURES OF THE ALGERIAN CURRENT

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This communication is a digest of a more detailled paper (Millot,1985).

A coherent analysis of hydrodynamical data and infrared images leads to a new conception of the dynamics of the Algerian Current. It is suggested that this current steadily flows along the coast near 0° and becomes unstable near 1-2°E : eddies of both signs grow while being advected by the mean current. Shortly eastward, the cyclonic eddies reduce while the anticyclonic ones are still growing : they extract more and more energy from the mean current, they are advected more and more slowly, they can detach from the coast near 6°E and then, drift for a long time in the Algerian Basin.

Therefore, this basin looks like a reservoir in which the atlantic water is amassed before flowing into the adjacent basins ; in particular, it is a buffer zone which disconnects the flow coming in at Gibraltar from the flows going out towards the Strait of Sicily and the Ligurian Sea. In other respects, coherent explanations are proposed for the upwellings along the algerian coast, the occurrence of lenses of intermediate water in the open basin and the large eastward gradient of salinity in the surface layer.

Millot C., 1985 : Some features of the Algerian Current. To appear in Journ. Geophys. Res..