

## ABSTRACT

### Traduction en Anglais du résumé

In the western basin of the Mediterranean Sea, Millot proposed in 1987 new circulation diagrams that have been completed and validated by several in situ campaigns. In the eastern basin, he emphasised in 1992 that the surface circulation was similar, i.e. was alongslope, counterclockwise, with an intense mesoscale activity in the southern part. Nevertheless, the POEM schema, which has generally been well accepted up to now, features a mid-basin circulation that generates recurrent and/or permanent circuits. The visual analysis of satellite images collected during 5 years and their comparison with the available in situ observations has allowed us to comfort our hypotheses and to propose a schema dramatically different (Hamad *et al.*, 2005\*). The alongslope circulation (**gyre**) generates in the south anticyclonic **eddies** ( $\varnothing=50-250$  km) that can propagate at up to 2-3 km/day and last up to 3 years. As shown in the Algerian sub-basin, these eddies might sometimes extend down to the bottom ( $\sim 3000$  m), and then be driven by the deep isobaths towards the central part of the Levantine sub-basin where they are trapped (in the Herodotus trough) and interact up to merging. EGYPT, international project in which our Egyptians colleagues are involved, aims at validating our circulation schemata (Millot and Taupier-Letage, 2005a\*), in particular with  $\sim 6$  currentmeter moorings, drifting buoys, profilers and high-resolution hydrological sections, allowing specifying the circulation at superficial, intermediate and deep levels, together with the structure and trajectory of the eddies.

\* available on the site: <http://www.ifremer.fr/lobtln>