



On the main flow features of the SE Levantine (CYBO cruises 1995-2012)

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The main characteristic of the circulation in the Eastern Mediterranean Levantine Basin is a general cyclonic flow following more or less the coastline, with several persistent eddies in the open sea. The interaction between all of these dynamical features produces a complicated flow pattern with strong spatial variability on a synoptic, seasonal and inter-annual scales. The continuous seasonal/annual hydrographic survey of the SE Levantine since 1995 within the frame of the Cyprus Basin Oceanography program (CYBO) and the Haifa-section cruises, along with data from project surveys (CYCLOPS, MSM/14) and recent data from autonomous platforms, such as those from Argos floats, drifters and gliders (NEMED, YPOKINOUMODA, GROOM projects) have all provided insight on the three dominating flow features in the SE Levantine Basin. Namely, the two warm core eddies, i.e. the Cyprus and Shikmona, and the open sea flow jet, that of the Mid Mediterranean. After some years of disputes, it is well-documented with all these in-situ data that the Cyprus warm core eddy is the most influential flow feature in the area, with significant fluctuations in time and space, while the generation of the Shikmona eddy was observed for the first time. Moreover, the cross basin flow of the MMJ is also well-documented, confirming the relevant POEM results, to transfer also significant amount of AW further to the most-eastern part of the Levantine, after passing between Cyprus and along the northern periphery of the Cyprus warm core eddy.