



The Atlantic Water in the Eastern Mediterranean Levantine Basin

George Zodiatis (1), Steve Brenner (2), Daniel Hayes (1), Isaac Gertman (3), Panos Drakopoulos (4)

(1) Oceanography Centre, University of Cyprus, Nicosia, Cyprus (2) Department of Geography, Bar Ilan University, Ramat Gan 52900 Israel (3) Israel Oceanographic and Limnological Research, Haifa, Israel (4) Technological Educational Institute of Athens, Greece

New in-situ data sets obtained from 1995 to 2005, provide evidence of the Atlantic Water (AW) and of the mid-Mediterranean jet (MMJ) in the Levantine Basin, confirming the earlier schema of the MMJ as an offshore cross-basin flow, depicted in the 1980s within the framework of the Physical Oceanography of the Eastern Mediterranean (POEM) experiment. The data were collected from hydrographic surveys and an open sea observatory within the framework of several projects, such as those of Cyprus Basin Oceanography (CYBO), Cycling of Phosphorus in the Mediterranean Sea (CYCLOPS), Haifa Section (HaiSec) and the Mediterranean Forecasting System (MFS). The synoptic and high frequency in-situ data collected the last decade, indicate the MMJ meanders eastward, between the deep sea south of Cyprus and the northern periphery of the Cyprus warm core eddy or the Shikmona gyre, when is present. The MMJ is documented to transfer eastward the AW in the Levantine, both at surface and subsurface layers. The MMJ is the major driving force responsible for the eastward spreading of the main volume of the AW in the Levantine, while in-situ data closer to the southern part of the basin, provided evidence of a westward recirculation offshore of Egypt.