



Deep-water variability and inter-basin interactions in the Eastern Mediterranean Sea

Emin Özsoy (1), Sarantis Sofianos (2), Isaac Gertman (3), Anneta Mantziafou (2), Ali Aydogdu (1), Sotiria Georgiou (2), Ersin Tutsak (1), Alex Lascaratos (2), Artur Hecht (3), and Mohammed Abdul Latif (1)

(1) Institute of Marine Sciences, Erdemli, Mersin, Turkey (ozsoy@ims.metu.edu.tr), (2) University of Athens, Athens, Greece (sofianos@oc.phys.uoa.gr), (3) Israel Oceanographic and Limnological Research, Haifa, Israel (isaac@ocean.org.il)

The Eastern Mediterranean deep-water variability during the last 60 years, in relation to new water mass sources, is studied and analyzed through a comprehensive and most complete data set of temperature and salinity profiles. Decadal to multi-decadal variability is present in all sub-basins (Aegean, Adriatic, Levantine, Ionian) with the Eastern Mediterranean Transient being the most prominent event influencing the deep waters of the whole Eastern Mediterranean in the last two decades, demonstrating the strong interaction between the sub-basins. The changes that have occurred in the deep sea as a result of the EMT event dwarf anything recorded in the observed history of the sea, and illustrate how the long-term evolution of a seemingly stable circulation in a complex environment can be dramatically changed by relatively small perturbations.