TIME EVOLUTION OF THE HYDROGRAPHIC CHARACTERISTICS IN THE STRAIT OF SICILY DURING THE LAST 16 YEARS (FROM 1986 TO 2002)

A. Ortona(1), G.P. Gasparini(2), G. Budillon(1), M. Astraldi(2) and E. Sansone(1)
(1) Istituto di Meteorologia e Oceanografia, Università PARTHENOPE, Napoli, Italy, (2) CNR - ISMAR/Sez. La Spezia, Italy

Recent studies have definitively evidenced the highly sensitivity of the Mediterranean to the effects produced by the large-scale atmospheric systems. The rapid response of this basin when compared with the ocean time scales, makes the interannual variability of the circulation an important signal that, in some regions, may prevail on the annual cycle. We may also consider that the distinct sub-basins, often subjected to different atmospheric and dynamic regimes, produce specific water masses that can reach all the Mediterranean regions as far as the adjacent Atlantic Ocean by the connecting network provided by the internal straits and channel. In this scenario an important role is played by the Sicily Strait dividing the two principal sub-basins: the Eastern and the Western Mediterranean. A long-term monitoring of the hydrographic properties of water masses across this strait initiated in the second half of the ’80s allowed us to evidence the principal time scales of the water exchange between the Ionian Sea and the Tyrrhenian Sea. In particular, from a nearly annual observations we could observe the effects produced in the Sicily Strait by the water masses produced by the climatic transient occurred in the Eastern Mediterranean from its origin in the late ’80s to the present phase of relaxation. From our observations the impact created by them in the Tyrrhenian Sea was also observed. In this way, the space-time behaviour of a signal linked to a climatic event could thus be experimentally evidenced and studied.