

**Aegean influence in the deep layers of the Eastern Ionian Sea (October 1991)**

A. THEOCHARIS\*, D. GEORGOPOULOS\*, P. KARAGEVREKIS\*\*, A. IONA\*\*,  
L.PERIVOLIOTIS\*\* and N.CHARALAMBIDIS\*\*

\*National Centre for Marine Research, Aghios Kosmas, HELLINIKO (Greece)

\*\*University of Athens, Dept. of Applied Physics, ATHENS (Greece)

In the framework of the first general survey of the POEM-II programme, 100 deep CTD stations were occupied by R/V AEGAIO during October/November 1991 in the Eastern Ionian, NW Levantine and South Aegean Seas. Preliminary analysis of the data reveals that in the deep Ionian layers (1000-2000dbars) significant change occurs in the distribution of the hydrological characteristics and the structure of the water column, in comparison with the POEM-I (1986-87) relevant results (THEOCHARIS, 1989; THEOCHARIS *et al.*, 1990; THEODOROU *et al.*, 1988). Temperature and salinity present increased values over a wide region, ranging from 14.0°C and 38.80 to 14.3°C and 38.96 respectively, never reaching down to 2000dbars the characteristic values that correspond to the Eastern Mediterranean Deep Water (T: 13.6-13.7°C and S:38.65-38.70). The circulation is dominated by a large open sea, meandering anticyclonic flow intensified at Pelops gyre, to the south of Peloponnisos. However, mesoscale cyclonic eddies develop near the western Greek coasts, the western Cretan Sea and to the SW of Crete. Therefore, waters are transported southeastwards from the North Ionian, while Aegean waters outflow through the Kitherian Straits. Considerable amounts of the latter relatively warmer and more saline waters form a large tongue in the Ionian. Furthermore, they are trapped by the intense anticyclone and are transported down to great depths affecting considerably the characteristics and the structure of the water column. It is worth to mention that during different seasonal cruises of POEM-I (1986-87) the Aegean contribution was limited in small patches in depths 700-1000dbars. Moreover, previous authors have mentioned that deep Cretan waters were detectable in the vicinity of the Cretan Arc Straits.

**REFERENCES**

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