

## MIDDLE PLIOCENE MICROPALAEONTOLOGICAL AND STABLE ISOTOPE RECORDS FROM CYPRUS ISLAND (EASTERN MEDITERRANEAN)

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The section Essovouyes-Exovouyes in Cyprus Island provides a continuous record of Pliocene to early Pleistocene marine deposits in the eastern Mediterranean. It is located on the south margin of Messaoria basin, central Cyprus. The section is about 100 m thick and its middle part consists of well-preserved cyclic marine sediments including laminated brownish marly layers alternating with grey homogeneous marls.

Micropaleontological and stable isotope analyses highlight Pliocene climate variability of the eastern part of Mediterranean. Our analyses are centered in the interval 3.9-3.0 Ma. Seven astronomically dated planktonic foraminiferal bioevents were recognized and constrained the age model of the studied interval through linear interpolation: (1) LCO of *Globorotalia margaritae*, (2) LO of *Globorotalia margaritae*, (3) FO of *Globorotalia crassaformis*, (4) disappearance of *Globorotalia puncticulata*, (5) reappearance of *G. crassaformis*, (6) reappearance of *G. puncticulata* and (7) LO of *Sphaeroidinellopsis*.

Long term trends in oxygen isotopes are correlated with SST record derived from the planktonic foraminiferal assemblages and mostly reflect changes in global climatic conditions, with a more local or regional signal superimposed on this record.

Planktonic foraminifera and oxygen isotope record indicate three distinct warm periods interrupted by two cooling intervals. Significant higher values in  $\delta^{18}\text{O}$  due to decreases surface water temperature occurred at 3.62 and around 3.54-3.36 Ma and reveal that the glacial cycles are also influenced the eastern Mediterranean.

High amplitude shifts in oxygen isotope record are correlated with TOC and carbon isotopic data as well as micropaleontological data and revealed the presence of numerous cycles including organic-rich laminated brownish sapropelitic layers alternating with homogeneous marls, suggesting a climate characterised by a period of warm/temperate and humid conditions and a highly stratified water column that occurred at times of precession minima.