



Secular variation in planktonic foraminiferal Tyrrhenian record in the last 2000 years

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A ~2000 years long sedimentary record recovered from a gravity core on the eastern Tyrrhenian margin (Salerno Gulf) has been analysed by a multiproxy stratigraphic approach and provides a new sub-century paleoclimate time series of the Central Mediterranean. In particular, high sedimentation rate documented for the studied area and tephra layers of Vesuvius volcano interbedded within the marine succession, attributed to specific volcanic eruptions, along with an AMS ^{14}C dating of the core top have provided an accurate time framework for the studied record.

Comparison of the *Globorotalia inflata* time series with the reconstructed Total Solar Irradiance (TSI) index and tree rings $\Delta^{14}\text{C}$ record, suggests a primary control of the insolation forcing on the planktonic foraminifera assemblage of the eastern Tyrrhenian Sea during the latest Holocene. In particular, the ~200 years (Suess cycles) and ~500 years oscillations attributed by several authors to solar activity were reliably recorded in the *G. inflata* time series, thus reinforcing the hypothesis that centennial fluctuations of solar intensity exert a primary control on the Mediterranean planktonic assemblage distribution.