

## ***Interactive comment on “Natural variability and anthropogenic effects in a Central Mediterranean core” by S. Alessio et al.***

**Anonymous Referee #1**

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This paper presents an analysis of a 2200 years long time series of O18 from a sediment core from the Ionian Sea. Methods of data collection and basic properties of the data have been described by Taricco et. al. in Clim. Past, 2009. The authors use this long record to separate the contribution of natural variations from the anthropogenic signal in the industrial era. Singular spectrum analysis is used to identify the dominant oscillatory patterns before 1840, and these are projected forward to 1979 using AR modeling and a neural network algorithm to estimate the natural signal in the O18 record of the modern period. The method succeeds in showing the difference between the natural signal and the observations in the 1840-1979 period, which is interpreted as the anthropogenic contribution. The paper is a good example of a well written paper. It avoids repetition and excessive verbiage and makes the major points clearly; the figures are easy to understand, and the result obtained is significant.

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Interactive comment on Clim. Past Discuss., 7, 3699, 2011.