

Interactive comment on “Holocene vegetation and climate changes in central Mediterranean inferred from a high-resolution marine pollen record (Adriatic Sea)” by N. Combourieu-Nebout et al.

Anonymous Referee #2

Received and published: 7 May 2013

This paper presents a detailed pollen record from the Adriatic Sea, covering most of the last 13,000 years (the last 2000 years are missing). Reconstructions of vegetation and climate are discussed and compared with regional and global climatic records. Overall, the data presented here are sound and the interpretations of the findings are convincing. However, there are a few issues in the data presentation and the format that need to be addressed.

Age model: We are told that the age model is based on 21 AMS 14C dates (and not 13C, please correct throughout the manuscript), and INTCAL04 is used. That is puzzling as dates are derived from marine plankton, so Marine09 (a more recent

C645

database) should be used. Furthermore, there is no information about the reservoir correction applied here. If possible, add a column for R (or deltaR) and ideally, using CLAM, an age-depth graph with the probability envelop. Because we can not verify here the data, one can question one of the concluding points, with regards to the time lag with the ice core record.

In section 5, page 1982, lines 11 to 15, SSTs are mentioned but not shown. It would strengthen the comparison if you could add it in your Fig 5 for instance.

In section 6.1, page 1985, lines 10-15, I do not agree with the description of MTCO. In fact, they remain constant until 7700 y BP and then, you see fluctuations followed by an increase. MTWA show a strong decline until 7700 y BP. So, what we see here is a decrease of the seasonality between the beginning of the Holocene and 7700 y BP. I suggest that you add a horizontal line to indicate modern values for each of the variables.

Fig. 5: How were the anomalies calculated? Caption should be more accurate and say “temperature anomalies”

Structure of the paper Some sections should be moved in order to have a more coherent manuscript. - Section 2 should be included in the material section. - Section 3.4 (pollen inputs) belongs to the discussion. - Section 3.5 (Clay mineral origin) possibly in the discussion. - Section 4 should be called Material and methods

Some minor corrections were also annotated in the text.

Please also note the supplement to this comment:
<http://www.clim-past-discuss.net/9/C645/2013/cpd-9-C645-2013-supplement.pdf>

Interactive comment on Clim. Past Discuss., 9, 1969, 2013.

C646