

Interactive comment on “The Climate of the Common Era off the Iberian Peninsula” by Fátima Abrantes et al.

Anonymous Referee #2

Received and published: 27 September 2017

The article by Abrantes et al. both reviews the available literature on climate changes around the Iberian Peninsula during the common era and analyze a series of multi-proxy/multi-site records of SST and continental runoff.

I feel the article is too long and descriptive, and clearly lacks a problematic. I wonder if it would be more suitable either to shorten it thoroughly - to only present the new results - or to write a kind of two-part article (part I presenting the review / state of the art, part II presenting the new results). On the one hand, the authors are clearly the most appropriate paleoclimatologists to provide an extensive review of the Iberian Margin's paleoclimatology during the common era, and it would be a shame if their knowledge could not be shared with the community, but on the other hand I find that the article is really difficult to follow as it stands. Anyway, the authors should distinguish more clearly

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those parts of the article where the new data are presented and analyzed WRT those other parts where the new data are confronted to the literature. The 'review' aspect of the article is disseminated everywhere in the article, and too often shows up without further justification, which sometimes leads to non-sequitur.

It is much easier for me to review the article by listing specific comments:

-page 1: Abstract, first sentence, is not convincing at all. Please remove it.

-page 2: Lines 6-11, those lines are too complex and could not be properly understood without having a read over the modern climatology chapter.

-page 2: Line 23, perhaps cite Guiot and Cramer, 2016, Science, for a more recent assessment.

-page 3: Here the discussion would greatly benefit if the authors could add a series of very simple figures introducing the NAO, EA and SCAND modes of climate variability, in particular since the authors often refer to those modes later in the discussion.

-page 4: Here the reader is really lost, and could not remember any clear information at the end of the page.

-page 6: Line 31, please check that "standardized" and "scaled" are not referred to "normalized" and "standardized" instead.

-page 8: Line 2, "All age models . . . all accepted 14C dated levels" reads like you've discarded some of them. Please clarify the age model description.

-page 9: Lines 23-31, the discussion on the most recent SST shifts could be either discussed later, or more developed (what is the great salinity minimum?). It is difficult to see what happens over the last 50 years.

-page 10: on the n-alkane concentrations, lines 1-10 please explain more how you calibrate the proxy. I would intuitively expect that dilution plays an important role, so that the more riverine runoff you get, the more alkanes would be diluted by terrigenous

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material, but it seems to be the contrary. . .

-chapter 5.3: please try to be more concise through sorting out the results and discussion separately. Why are you not discussing the LIA? Also, I find the wavelet analysis neither convincing nor useful to the discussion, and I don't see how you could extract significant periodicities longer than a century over time windows shorter than two centuries.

-figures: please check the captions. In general, there are too many panels.

Overall, the article remains too confusing at this stage. I realize it is difficult to be constructive, and that I share many concerns with the Anonymous Referee #1. Perhaps the key would be to frame better the manuscript, including the identification of a clear scientific question, along with clearer chapters and sub-chapters within which diverse informations do not impinge from one chapter to another.

Interactive comment on Clim. Past Discuss., <https://doi.org/10.5194/cp-2017-84>, 2017.

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