Interactive comment on “Rapid climatic variability in the west Mediterranean during the last 25,000 years from high resolution pollen data” by N. Combourieu Nebout et al.

J. Guiot (Editor)
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Dear authors we have received four reviews of your paper: "Rapid climatic variability in the west Mediterranean during the last 25,000 years from high resolution pollen data"

Rev#1 is extremly positive
Rev#3 is also positive and recommend publication after considering some minor revisions, especially versus the confidence on the time scale.
Rev#2 is more negative, even if he recognises that the paper is well written and that the record provides an important contribution on vegetation changes in Mediterranean basin. Nevertheless he recommends rejection of the paper because, he says, numerical reconstruction of climate initially developed for land cannot be applied per se to ocean records. Some of his arguments are receivable, some others are more a general criticism of marine palynology. You have replied to the arguments in a long letter. Your arguments are also theoretically receivable, but there is really here a problem of school. My opinion is that your paper should be published if you are able to provide more quantitative arguments about that paradigm: "do the pollen assemblages from marine sediments give unbiased information on climate?". It should be possible to collect a few tens of core tops in the Mediterranean sea and to reconstruct climate from pollen assemblages. Provide a figure (observed vs predicted) of the results, discuss it in the revised version of the paper. The fact that Fig 3 shows that the climate of the core top is close to 0 (modern anomaly) is an indication that the methods works, but one points is not enough. An alternative is to summarise in a table all the marine reconstructions already published. This quantitative prove will be much better than a long discourse.

A fourth review has been received recently, which also recommend publications with a few minor revisions.

Then re-submit a revised version of your manuscript according to my suggestions and taking into account the comments of the reviewers. Provide a letter explaining what you have modified and what you have not (with your arguments). Best regards