

## ***Interactive comment on “Contrasting patterns of climatic changes during the Holocene in the Central Mediterranean (Italy) reconstructed from pollen data” by O. Peyron et al.***

**Anonymous Referee #2**

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Climate change over the last 10 000 years in the mediterranean area is an issue of concern to the scientific community. The manuscript submitted by O. Peyron and co-authors is an important case study of the ability of pollen data for paleoenvironmental reconstruction. The paper is well organised and the different items are really pleasant to read even if the complex timing of holocene events (detailed in the paragraph 4.1 to 4.5) recorded in those Italian lakes remains sometimes unclear. The manuscript is supported by useful tables and figures.

The paper is appropriate for Climate of the Past and I recommend its publication after some corrections (comments and recommendations of the referee - see below). The

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writing needs probably further editing to improve the grammar and readability.

1) On page 5824 : The description of Lake Ledro needs to refer to the papers submitted by Vanniere & co-authors and Simmoneau & co-authors (same special issue) line 15 : the word “deep” is inappropriate line 20 : 66 yrsample-1 seems to be too accurate since the accumulation rate needs error bars.

2) The Lake Accesa is located at 42°N, right in the middle of the North-South transect from Sicilia/Calabria to the alpine/italian lake district. What does it mean exactly in terms of actual climate mediterranean boundary ? Does it make sense in the scope of this paper or can we imagine an interpretation of contrasting patterns without taking into account this Tuscany record ?

3) Authors never mentioned the cover and vegetation changes due to human activities. However some papers dealing with metallurgy in Italy suggest a deforestation and a probable anthropic forcing of the forest development.

4) The North-South partition pointed out by the authors is directly linked to the mid-latitude climate system at a synoptic scale. Therefore, a synthetic figure/scheme explaining the probable evolution of the atmospheric pattern and circulation features could be of benefit to the reader.

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