

Interactive comment on “A multi-proxy perspective on millennium-long climate variability in the Southern Pyrenees” by M. Morellón et al.

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The authors acknowledge comments and suggestions made by Referee 2. As stated in previous comments, we are aware of the difficulties derived from the comparison and interpretation of such a heterogeneous set of proxy data, including different types of archives (tree-rings, lake sediments, glacier records, pollen, etc.) with different chronological resolutions and sensitivities to different climatic parameters. According to the suggestion of the two referees, a specific section including a discussion and a critical evaluation of the different types of records reviewed in this paper will be included in the revised manuscript. We will also be more specific when referring to hydrological changes (runoff vs. water balances). The same applies for comparisons with extreme cold events likely not recorded in all our records.

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Our hypothesis about a relationship between higher humidity during a negative phase of the NAO during the LIA can be identified almost exclusively at a multi-decadal to centennial timescale, with a clear change (increased humidity) during the MCA-LIA transition. However we will be more cautious when interpreting this variability at a shorter timescale, following the advice of Reviewer 2.

We also acknowledge minor corrections suggested by Dr Gerardo Benito. Inconsistencies dealing with the terminology and temporal extent of the main climatic phases identified in this review will be corrected. Paleoclimatic information derived from paleofloods in the Pyrenees and the Iberian Peninsula will be included in the revised version of the manuscript.

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