

Interactive comment on “Tree-ring proxy based temperature reconstructions and climate model simulations: cross-comparison at the Pyrenees” by I. Dorado Liñán et al.

Anonymous Referee #3

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Clarification of a previous comment for the author.

In response to my third major comment, the author stated "The reviewer indicates that the simulated long term trends throughout the 20th century may be caused by internal climate variability." - this is not what was meant by the comment in my review. I have no issue with this conclusion by the authors - it is quite clear that external forcing appears to be the culprit here.

Instead, the criticism was about the causes of discrepancies between the model and reconstruction/instrumental data on shorter time scales (one or two decades). I was simply pointing out that these discrepancies might not have anything to do with short-

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comings in the model (e.g. land use schemes etc) and instead are because the internal climate variability in the model and reality are different (as they should be because this is how climate models work). Again, I point to the sentence on Page 3940, lines 21-23 that state "Therefore, this particular warm episode may not necessarily appear in simulations due to the possible shortcomings in regard to model internal dynamics". Here, I am saying that the differences in a decadal-scale warm episode (e.g. 1730 used in the manuscript) are not necessarily due to shortcomings in how the model represents the internal climate dynamics, as stated by the author, it may just be that reality and the model are representing different internal dynamics. This is not a shortcoming in the climate model.

Re-reading the discussion regarding land use schemes, I see this is talking about a longer term trend (I mistakenly thought it was about decade-to-decade variations), so I agree that inadequacies in the model do require the discussion. However, I still feel that the authors give too much weight to the land use scheme idea when there are many other model short comings that require just as much discussion (e.g. cloud parametrizations etc). So I think this needs to be shortened considerably.

Interactive comment on Clim. Past Discuss., 7, 3919, 2011.

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7, C2433–C2434, 2012

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