

Interactive comment on “Process based model sheds light on climate signal of mediterranean tree rings” by R. Touchan et al.

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General Comments:

A new, unique, and potentially powerful model (tool) for management of natural resources carefully outlined by well known and highly regarded dendrochronologists and mathematicians. A comprehensive listing of references supports the paper. The application of a tree-ring chronology of *Pinus halepensis* from Tunisia appropriate.

Specific Comments:

Formulation and application of model simulates climatic signal based on coniferous tree-ring chronology. However, is the model equally applicable to tree-ring chronologies of angiosperms (hardwood trees)?

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Estimate of the water content of soil to be obtained from daily temperature and precipitation measurements following the procedure of Thornthwaite and Mather is a key element of model. In the absence of knowledge of daily temperature and precipitation, can such an estimate be obtained by an alternative methods?

Figures appropriate for manuscript.

Technical Corrections:

(Editorial Suggestions)

The word "may" on line 15 of page 11090 should probably be replaced by the word "can."

The word "which" on line 20 of page 11092 should be replaced by the word "that."

Might change sentence on lines 21-22 of page 11093 to read "..... the water content at the start, during, and end of the growing season."

The word "which" in the caption of Fig. 1 should be replaced by the word "that."

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