

***Interactive comment on “Reconstruction of
southeast Tibetan Plateau summer cloud cover
over the past two centuries using tree ring
 $\delta^{18}\text{O}$ ” by C. Shi et al.***

T. Kiefer (Editor)

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Received and published: 11 August 2011

Dear authors,

your manuscript has now received two expert reviews. Both reviews have a generally encouraging tone, but also raise fundamental concerns that will require major revisions.

Both referees would like to see the data published and also welcome the use of tree ring oxygen isotope data and the attempt to exploit their paleoclimatic information. However, the referees also question the direct interpretation of tree ring $\delta^{18}\text{O}$ as an indicator of cloud cover. The reasoning given in the manuscript so far was obviously not convincing enough. The interpretation of the cellulose- $\delta^{18}\text{O}$ is at the very heart

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of your paper. Therefore, you need to either make a much more convincing case that $\delta^{18}\text{O}$ can be tied to seasonal cloud cover both, empirically and mechanistically. Or you argue for a less definitive but more differentiated interpretation of the $\delta^{18}\text{O}$ signal and rephrase the paper accordingly. The reviews provide very specific suggestions on how you could address this.

The reviews also contain several other useful comments, which you should take into account.

If you believe that you can meet the concerns of the referees, I am asking you now to individually respond to all points raised by the referees and to submit a manuscript that is revised accordingly. The revised manuscript will then be sent out for another round of reviews.

Yours sincerely,

Thorsten Kiefer

Interactive comment on Clim. Past Discuss., 7, 1825, 2011.