

## ***Interactive comment on “Decreasing Indian summer monsoon in northern Indian sub-continent during the last 180 years: evidence from five tree cellulose oxygen isotope chronologies” by Chenxi Xu et al.***

**Anonymous Referee #2**

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In their work, combining a new tree-ring isotope record with the existing records, Chenxi et al have constructed a regional tree ring cellulose oxygen isotope record for the northern Indian Subcontinent. The authors further show correlation between the tree-ring isotopic record and various indices of the monsoonal strength. After establishing this coherence, the authors further use the tree-ring isotope record for understanding long-term variation in monsoonal precipitation. Overall the manuscript is written well and arguments are coherently presented. I recommend publishing the manuscript with minor revision.

C1

Following points should be considered while revising the manuscript.

Section 3.3 is too long to read. Consider subdividing into smaller sections.

Page 9 first paragraph : epikarst dynamics could be more responsible for the incoherence of the two records. Some discussion is required.

It would be helpful for the reader if authors describe the nature of long-term variations in modern instrumental rainfall data. Analysis by Sontakke et al Holocene 2008 and Bhutiyani et al IJC 2010 could be helpful. In fact, the latter article also points out to a significant decreasing trend since 1866 in the monsoonal rainfall.

The way regional isotope record is constructed (average of averages of d18O records of different sites) underestimates the uncorrelated variability. Quantification regarding this should be added to Table 2.

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