Interactive comment on “The climate reconstruction in Shandong Peninsula, North China during the last millennia based on stalagmite laminae” by Q. Wang et al.

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Thank you for your comments patiently and seriously.
We have taken the effective and detailed comments into serious consideration.

1. Comments: “The manuscript is difficult to read.”
The expressions of this manuscript should be corrected to avoid ambiguity and awkward expressions. And many words need to be replaced.

2. We are trying to provide correlation coefficients to show the relation among Δδ18O value, monsoon intensity or other palaeoclimate reconstructions or historical data in this region based on mathematical and statistical analysis.

3. We will verify the time scale of the sample again and add the ± uncertainty after the years and confidence intervals mentioned in the study.

4. We are looking for more references that can be cited to testify the conclusions in this paper.

5. The title of this paper can be replaced with “The climate reconstruction in Shandong Peninsula, North China during the last millennia based on stalagmite laminae and Δδ18O value”.

6. The tree species will be deleted because this manuscript do not have Δδ13C values.

7. Comments: “I would suggest this section to be merged with section 3 and separate each part in a different subsection. For instance, the last part of section 2 (Lines 5-12 in pate 4648) could be merged with subsection 3.2 (Lines 1-12 in page 4649) to present the U contents and the age-depth model together.”

For this comments, we will try to put this part in order after verify the time scale of the sample again.

8. We will add a map of the cave to show the location of stalagmite Ky1.

9. We will add the label in line7 page 4648, and update the figure numbers accordingly.

10. We are trying to estimate a confidence interval associated to the lamina counting.

11. In section 3.3, expressions are vague to read, some expressions will be corrected, and we will make up the defects in this section.

12. We are looking for more references to testify the conclusion and compare with other data published in the area in section 4.

13. The word “reckon” will be instead of “calculate”.

C2530
14. Comments: “It is not clear to me what you are using the 25mm data for, if the
results you provide as the final time series are those considering only the data from
6mm (see lines 18 and 24).”

We used the 6mm data for dating, and we will make it easier to understand and clearly.
15. We will develop the idea presented in section 4.2, a XRD results/figure may be
better, we are trying to show a XRD results/figure.
16. Line 5-7 page 4651 and line 9-13 page 4651, the expressions in this part will be
corrected and we are trying to find more evidence.
17. Line 21 page 4651, we will add (Fig.5a,d).
18. Line 21 page 4651 and line 18 page 4652, we will use a simple dash and write the
lowest value first throughout the manuscript.
19. We will provide an objective index of variation or fluctuation of the data and select
an appropriate time intervals to divide different periods.
20. Line 6 page 4652 and Line 11 page 4652, we are trying to correct the expressions
in this part. The period between 1471 and 1892 may be divided differently based on
item 19 above.
21. Line 18 page 4652, I had check this part. “The standard deviation (1) for replicate
measurements on NBS-19 is < ±0.10‰” (in line 4-5 page 4650) The expressions need
to improve.
22. The word “sustaining” in this paper will be checked again based on different peri-
ods.
23. We will provide correlation coefficients (and their statistical significance) in section
4.5.
24. We will clarify the error of the age model. Because we use the horizon of 6mm to
establish time scale and dating. The error of the age model is 20 years in this paper.
25. We are trying to choose a better method to show the correlation based on mathe-
matical and statistical analysis.
26. We are considering to add a plot with the hendy test results to make this paper
easier to read.
27. Line 6-8 page 4654: We are looking for more analysis and comparisons with
other data to support the statement based on more references. And Figure 6 will be
improved.
28. We are trying to add a description of the results of the study by Cheng et al. (2009),
and find evidence.
29. Line 12 page 4655: “detention time” may be same with the expression of “water
retention time”, and “water transit time” may not good, we will find a better expression.
30. Section 5 will be named “Conclusions” instead of “Results.
31. We are considering to make the conclusions more significant.
32. Figure 1: We will correct this figure as the comments.
33. Figure 3: This figure will be corrected as the comments and the caption needs to
add some information.
34. Figure 4: We will try to add the time scale of the stalagmite in Figure 4. And more
information in the comment will be added into the figure.

For more correction about this paper, we will show it in a final author comments or a
revised version.

The authors

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