

Dear Dr. Middelburg,

Thank you for your email and for accepting my paper for publication in Biogeosciences. I am pleased to hear that the manuscript is now accepted pending technical corrections. Below are the responses to the technical corrections you have requested.

I have made the necessary changes and hope that these revisions meet your requirements. Please let me know if there are any further adjustments needed.

Thank you for your time and consideration.

Best regards,

Dr. Tian

Professor of China University of Geosciences (Beijing)

E-mail: typ@cugb.edu.cn

Technical Corrections and Responses:

1. Figure 16 citation: Figure 16 is cited after figures 1 and 2, before figures 3 and further. It is common practice to number figures based on their appearance. Please renumber and correct all figure numbers throughout the document.

Response: The figure numbers have been modified as requested. However, based on the content of the text, it would be more appropriate to place Figure 16 after Figure 3. Since Figure 2 and Figure 3 both introduce the climate of the study area, their numbering should be consecutive.

2. Y-axis digits in Figures 2 and 3: Figures 2 and 3 have too many digits on the y-axis. For example, change 300.00 to 300, 40.00 to 40, etc.

Response: The y-axis digits have been modified as requested.

3. Line 271: (3) Relative Volume percentage....

Response: Not modified, as this follows the numbering from above (1). See **Line 261** in the revised manuscript 3.

4. Line 383: Replace “on the other hand” with “however” (in English, “on the one hand” and “on the other hand” always come together).

Response: The phrase has been modified as requested.

5. Line 489: ... (Fig. 20). A conceptual diagram of the formation of these...

Response: The line has been modified as requested.

6. Line 576: ... framework. This makes it difficult to

Response: The line has been modified as requested.

7. Line 609: ... dust, which also needs to be taken into account.

Response: The line has been modified as requested.

8. Line 645: ... facing. Consistently, the metabolic...

Response: I suggest modifying it to “... facing, while the metabolic...” as it indicates a contrast. The text means that the strongest weathering intensity of the Temple of Heaven is in the south direction, while the strongest weathering of the Florence Cathedral is in the southeast direction.