Dear authors,

Thanks for your revised ms. I am sorry to hold this up, but could you please provide more information on exactly how you derived the composite age model in Figure 2b? It is not easy to understand the procedure based on the information provided in the figure caption, and in any case a full explanation should be provided in the main text (the Methods section preferably). For example, I am guessing that StalAge was applied to all of the U-Th ages/depths, but it not clear from the information provided how you incorporated/spliced the layer-counted section to the U-Th-based parts either side. I realise this may have minimal impact on your final age estimates of key events, etc. but I am sure that (technically) how you carry out this anchoring will be of interest to readers, especially those specialising in speleothems.

Re: We thank the editor for the suggestions. In the revised version, we added the relative description about the chronology reconstruction using the combination of layer band counting and Stalage algorithm. In detail, the fitted age and error for each annual band between 16 and 43 mm were obtained based on the least square method (Duan et al., 2023). To establish a consecutively composite chronology for the entire record, all these fitting results in 16–43 mm (corresponding to 8.077–8.324 ka BP) with uncertainties and the other fifteen ^{230}Th dates in the remnant study section were input to Stalage algorithm. In this way, the seven ^{230}Th dates drilled from 16–43 mm were only used in the layer band counting procedure but not the Stalage age model. The output results of Stalage were adopted as the reconstructed chronology for isotope and trace element records.

Please note also that: (i) the 'layer counting' label in Fig 2b has a spelling error, which should be fixed; (ii) please make the final age model line used in the paper more obvious, as it is difficult to see resolve in the PDF; (iii) one of the red ages from Duan et al. (2023) seems to be a new age for this paper (the youngest age), as it doesn't appear in table S1 of the 2023 paper; and (iv) the second oldest age (BH-2-6) from Duan et al. (2023) has a different depth in this current manuscript - if this has been updated from the previous paper, please let the reader know, but if not, please correct it.

Re: i) the spelling error was corrected; ii) the final age model line was replaced with bold blue line; iii) the youngest red age is a new one present in this study and hence should be marked by black; iv) we corrected this depth from 43mm to 45 mm.

Note: we rearranged the information of foundation grants in the acknowledge section.