

Dear authors, thank you very much for the substantial revisions and taken the comments of the reviewers well into account. I only have three minor issues I wish to address, this can be done in a very short time.

Concerning text lines 290ff (document with track changes):

I refer to my comment from December where I stated on the Buentgen/model comparison: It seems that there is a large difference around 540, around 575 and 630, also obvious is the general overestimation from around 545 to 575 and underestimation until 640. Indeed, it would be interesting if this is a feature for this reconstruction only or also shared with independent evidence from other reconstructions.

you very well addressed the discrepancies around 540, not on the other two periods. Could you please check again your text and see if that can be addressed.

**Dear Jürg Luterbacher, thank you for your valuable comments.**

**1.) We have changed the paragraph with the discrepancies for the other periods in the results section (line 274-278 in the new manuscript):**

**‘The temperature recovery is different for the Büntgen et al. (2021) tree ring ensemble and the model ensemble (Fig. 6). After the 536/540 CE volcanic double event, the modeled temperature recovers faster than the reconstructed Büntgen et al. (2021) mean temperature, in agreement with Stoffel et al. (2015) and Guillet et al. (2020). However, even though the Büntgen et al. (2021) ensemble mean falls outside the model ensemble range after 536/540 CE, some of the members from the reconstructions are still within the model ensemble spread. The model and tree ring data comparison shows a quite diverse picture dependent on the time period and reconstruction considered. In the three decades after the 536/540 CE volcanic double event, from around 545 CE to 575 CE the simulated temperature anomalies are in good agreement with Stoffel et al (2015) and Guillet et al (2020), but smaller in comparison to Büntgen et al (2021). Around 640 CE the model results and the reconstructed Büntgen et al (2021) data agree quite well, while the Stoffel et al (2015) and Guillet et al (2020) data show a distinct minimum.’**

2.) Please refer to Figure 6 in the text when you start describing from line 290ff

**Thanks, we have added the reference to Figure 6 in the text.**

3.) Generally on the period under considerations, please could you also cite the following new peer reviewed contribution related to the topic:

Xoplaki, E., et al., 2021: Hydrological Changes in Late Antiquity: Spatio-Temporal Characteristics and Socio-Economic Impacts in the Eastern Mediterranean. In: Erdkamp P., Manning J.G., Verboven K. (eds) Climate Change and Ancient Societies in Europe and the Near East. Palgrave Studies in Ancient Economies. Palgrave Macmillan, Cham.  
[https://doi.org/10.1007/978-3-030-81103-7\\_18](https://doi.org/10.1007/978-3-030-81103-7_18), pp 533-560

We have added this reference to the discussion about the Mediterranean (line 354 in the new manuscript).

'Xoplaki et al. (2021) reconstructed the hydroclimate from speleothems and lake sediments for the eastern Mediterranean, and found a sharp change to wetter conditions in the second half of the 6th century for all sites.'