

Referees 1: C. Spötl

This rather concise manuscript is part of an ongoing effort to improve the age control and resolution of the world-renowned Chinese speleothem record, providing a highly detailed history of the monsoon in China. The authors report data from two stalagmites from Sanxing cave which show synchronous variations in $\delta^{18}\text{O}$. This is an important time interval as it marks the end of the long Greenland Interstadial 21 and the transition into a generally colder climate (weaker monsoon in China). The quality of the chronology is excellent (clean, high-U calcite) and the age model is robust. Replication is achieved using the second stalagmite which covers a shorter but relevant time interval. This is largely a chronology paper which would have fitted equally well into a journal such as *Quaternary Geochronology*, and offers only limited paleoclimate insights. The most important aspect is the excellent chronology, slightly comprised by a hiatus in the older part. Prior to acceptance the manuscript requires reading by a native speaker.

Response. Thank you Dr. Spötl for reviewing our MS. Your encouragement motivates us to provide high quality paper to the readers. We have done our best to address your concerns and modified the manuscript in light of your suggestions. We invited Dr. Mahjoor Lone, a native speaker, to improve the language of the manuscript. He further revised this paper and improved the quality of the work and is therefore, listed as one of the co-authors in the revised version. The language should fly well in the revised version of this paper. Point-by-point responses to your comments are listed below.

Minor issues:

- The Introduction lacks a clear statement of the goal of this study

Response. Thanks for pointing it out. We improved the introduction and also included a paragraph on goal of the study followed by critical findings. More detailed information can be found on page 4 (lines 8-17) in the revised MS.

- Indicate the location of the hiatus in both stalagmites in Fig. 3 (cf. Fig. 2)

Response. Revised.

- There are some ambiguities with respect to the MIS5/4 boundary. On page 19 the authors say that this boundary is at 74 ka. Later, they state that “This rapid cooling at the end of GIS

21 at 77 kyr BP marks the transition from warm MIS 5a interstadial to cold MIS 4 stadial” (p. 4). This is also shown in Fig. 4 while in Fig. 2 the boundary is represented by broad bar. Maybe it is better not to use the MIS nomenclature and stick to the Chinese monsoon only.

Response. Agreeing with the reviewer, we changed MIS 5a/4 to CIS 21 and CS 21 in the revised Figs. 4, 5, and 6.

- The sentence on p. 5 is unclear: “and no any visible porous defects on the polished surface are observed”. What kind of defects?

Response. We have deleted the earlier statement and rewritten it.

The Conclusions are a bit short

Response. We have improved conclusions by adding more information. More details can be found in the revised MS (pages 11-12).