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Climate of the Past Discussions

# *Interactive comment on* "Variation in the Asian monsoon intensity and dry-wet condition since the Little Ice Age in central China revealed by an aragonite stalagmite" *by* J.-J. Yin et al.

**Anonymous Referee #1**

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Sorry, I failed to upload the comments before. Specific review comments: The manuscript obtained the high resolution oxygen isotopic data of stalagmite from the Lianhua Cave in central China since AD 1300, and analyzed by combining with local history weather events and regional climate index, which has important scientific significance. However, in this manuscript, there are many serious problems (see below) to be solved, so, I think that the present manuscript still not reached the level of publishing in the CP: 1. According to the descriptions in the Line 16-19 of P1308, it seems to tell the readers that this paper plans to solve the two problems, i.e. "the relationship between Asian summer monsoon precipitation and air temperature is not clear under the global warming trend " and " the driving force for variability of the Asian summer monsoon



since the Little Ice Age is also unclear". Unfortunately, Results and Discussion of this article is no good around these problems to write, not to mention there is a clear answer to these two problems. 2. In the Line 4 of P1311, "Up-to-date, approximately 650 subsamples .....", why use the word "approximately"? Is the number of samples unsure? 3. In the P1311-1312, there is a suspect of self-denial in the discussion for the Hendy Test. According to "In fact, it is impossible to drill samples on the same growth layer by hand and naked eye.", we know that this Hendy Test is not feasible, but the authors said other layers through the Hendy Test (isotopic equilibrium). In addition, "But, these correlations may be caused by age difference of the samples in the same layer rather than isotopic disequilibrium eposition.", where are the evidences of "age difference of the samples in the same layer"? The last sentence of the paragraph, "In addition, a few aragonite stalagmite records from Lianhua Cave had been published before (Cosford et al, 2008, 2009;. Zhang et al, 2013), demonstrating that the aragonite stalagmites from the same cave had isotopic quilibrium. ", it is debatable. In fact, we all know that in the same cave, some stalagmites deposition is under the isotopic equilibrium, but it does not mean those stalagmites in the other sits is under the isotopic equilibrium. 4. In the Line 10-11 of P1313, "The correlation ..... did not exist." The correlation should not be "did not exist", but the correlation is not good or irrelevant, right? In the Line 11-13, "the opposite direction of rainfall and temperature changes. This ..... (Fig. 8)." Temperature and precipitation in the grey bar of Figure 8 is incomplete reverse as the author called, the latter even is positive. The discussion in the Line 18-19 did not seem to be supported by Figure 8. 5. Many discussions are very far-fetched, such as the Line 3 and the Line 12-15 of P1314. 6. The first paragraph in the P1316 seems to be unrelated to the title of the section, no temperature. 7. It is unclear in the Line 13 of P1316. 8. In the Line 1-2 of P1317, can greenhouse gases weaken the Asian monsoon? Evidence? Theoretical basis? 9. Particularly, the discussion of the entire article is not array, nor deep, even in some places the evidences are clearly insufficient. Such as the Line 9-19 of P1315, the first paragraph of P1316. 10. It may be inaccurate that "the direction of water vapor flow" in Figure 1 (reference?), in particular in the

South China Sea. 11. There is a big difference between the description in the text and data in Figure 7 and Figure 9. In fact, we can see from these figures, many data are not corresponding. Authors only compared it to some particular events, while ignored the general trend. This method of grasping small ones and putting the cart before the horse is unacceptable.

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Interactive comment on Clim. Past Discuss., 10, 1305, 2014.