

Interactive comment on “Changes in C₃/C₄ vegetation in the continental interior of the Central Himalayas associated with monsoonal paleoclimatic changes during the last 600 kyr” by M. Mampuku et al.

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We are grateful to H. Wang for the fruitful discussion about continental interior in monsoonal region and the useful comments and suggestion to improve the manuscript.

Reply to H. Wang (Referee) comments;

Discussion 2. To correlate basal Zone 1 and Zone 2, 3, and 4 in RB core to MIS 5 appears not consistent with author’s argument. I understand that authors intended to make a perfect match between d13C excursions and MIS 5a, b, c, d, and e substages. But it is not self-justified. It is nothing wrong to correlate the low valued d13C excursions

sions in Zones 2 and 4 to MIS 5a-c (or in part) and MIS 5e, which can be explained by sedimentary hiatus, slow sedimentation rate, or probably only 2 rather than 3 warm phases in the terrestrial last interglacial in this region. Actually, our recent study of a long loess-paleosol succession in non-glaciated southern Illinois, USA, found 2 separated Bt horizons in the Sangamon Geosol unit that is equivalent to the MIS 5 (in review). It could be an important finding to show that the terrestrial last interglacial at the south slope of the Central Himalayas contains 2 equally warm rather than 1 strong and 2 weak warm phases as the marine record of MIS 5 indicates.

We did not negative the possibility that only two warm phases (or zones) were found during MIS 5 in continental interior in this area. But, further consideration and more high-resolution data are needed to clarify the correspondence of each peak. In this paper, we presumed that there is possibility that three peaks from Zone 4, 2, and basal Zone 1 correspond to three warm phases in MIS 5. Thus, we would show the possible correlation in Fig. 4. We amend the corresponding part in the figure to show just "possible correlation".

3. The results of n-alkanes analysis seem not to support author's arguments. Authors don't have to keep this line of analysis in this paper and consider saving the data for a separate paper with more indicative information in the future.

We now choose to exclude the results of n-alkane analysis in the revised manuscript. For additional information on the source of organic matter in the RB core sediment (interpretation of C/N ratio), see comment 2 to Ref. #1.

Authors need to explain the description of "the 218-m-long core obtained" on p874 and "the 180-m-long core" for the research on p876.

The sediment of lower part of the core (below 180 m in depth) is marginal facies of lacustrine environments in shallow water depth, changes in TOC, TN and d13C values from this sediment are expected to reflect the depositional environmental changes at that time. So, we use only the open lacustrine sediment up to 180 m in depth in this

study. We now include this description in the revised manuscript.

On p873, line 4 from the bottom, "(Manabe, 1974)" should be "(Manabe and Terpstra, 1974)".

This has been corrected in the revised manuscript.

On p886, line 5 from bottom, "1985" should be "1995".

This has been corrected in the revised manuscript.

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