

Editor comments on Manuscript No egosphere-2023-2186

Spring tropical cyclones modulate near-surface isotopic compositions of atmospheric water vapour at Kathmandu, Nepal by Adhikari et al.

I agree with the referee that the manuscript has significantly improved. However, I have several comments that should be considered before the manuscript can be accepted for publication in ACP.

Major comment:

My major concern is that the structuring of the result and discussion section is not adequate for ACP yet. I know that you separated the sections due to the comment of one referee. However, the discussion section as it is now is much too long and contains too much that rather belongs to the result section. So either, you go back to what you had before that you combine these sections and call it results and discussion or you move major parts to the result section and shorten the discussion to max. 3 pages.

Minor comments and technical corrections:

P5, L99: I am not sure if the correction of “during” to “including” is really correct. Do you evaluate the isotopic composition “during” a pre-monsoon cyclone event or do you have that additionally. In the latter case it would be indeed “including”, in the former however it would be rather “during”. Please clarify and change sentence accordingly.

P5, L101: These cyclones did not pass Kathmandu, but how far away where these and what did you see in the measurements? I understood that you saw them in the measurements, so that means you still have remnants or an influence of these cyclones over Kathmandu.

P5, L109: Please clarify and change text accordingly over which time period this precipitation amount given is referring to. Is it over one month or one day or per year?

P6, L112: ranges -> ranging and change “averaged” to “is averaged”.

P6, L118: Please mention instead of just “study period” explicitly which time period is considered.

P6, Figure 1: I think this figure could rather be moved to the Appendix.

P9, Figure 2: Also here, please give the time period over which the accumulated rainfall is given. Additionally in the caption the source of the data should be added.

P11, L190-191: GPM appears here twice. I guess once it is obsolete.

P11, L191: Add “for” before “latitude”.

P11, L199: Check grammar.

P11, L203: of -> for

P13, Figure 3: In the legend spaces between parameter and unit should be added.

P14, Figure 3 caption, L219: add “as indicated by the color shading”.

P14, L220: Rather “average” than “variations”?

P14, L223: Add “in isotopic composition” so that it reads “depletion in isotopic composition”.

P14, L232: Change “ranges from” to “the range was from”.

P14, L235: Add “to” so that it reads “to recover pre-cyclone values”.

P14, L237: Add “a” so that it reads “a d-excess.....”

P15, L240: Here you refer to Fig. S3, but Fig. S1 and Fig. S2 have not been mentioned yet.

P15, L238 ff: Since here and also in Sect. 4 Fig. S3 and S4 are discussed here in detail these should be rather appear in this section than in the Appendix.

P19, L298: Discussions -> Discussion. As mentioned before this section is much too long for a discussion and the majority of the content rather belongs to the result section.

P19, L300: back trajectories -> backward trajectories

P19, L303: I would change here “depletion” to “composition”. The depletion is the result of the cyclones, but what you are exploring is the composition.

P20, L318: majority of AS vapour -> not clear, please rephrase

P21, Figure 5 caption: Delete “moisture” and add “along the trajectories” after specific humidity.

P24, Figure 6 caption and text: Units should be given in the following format: g kg⁻¹ (see ACP guidelines).

P25, L400: As mentioned before, since Fig. S3 and S4 seem to play a larger role for your study than just some additional information these should rather appear in the manuscript itself than in the appendix.

P25, L407: Check reference to the figures. Fig. S5 and S6 show precipitation

P27, L446ff: Here your results/discussion are based mostly on Fig. 3 and Fig. 8 is only mentioned once. What is the purpose of Fig. 8? If this figure is not that important it should be moved to the Appendix.

P34, Figure 10. Also this figure could be rather moved to the Appendix since it is not really discussed/mentioned in the manuscript.

P33, L528ff: This last subsection is quite long and not solely about rainfall. It seems that there is some subsection header missing.

P33, L578: Should here the new subsection start? These parts are not about rainfall. Further, what is “CTT” and “CTP”? Abbreviations should be introduced.

P38, L619: Not clear, please rephrase what exactly what you mean with “unlike during Yaas”.