

**Reviewer 1:**

We thank the reviewer for their comment. Our response is indicated below in blue.

L205 of the revised manuscript reads "the trends in this category vary temporally (Figure S1)", but I think the sentence should be referencing Figure S2?

We have corrected this now. Line 205 now references Figure S2.

**Reviewer 2:**

The authors significantly improved the manuscript, addressing almost all the points raised in the previous version. Still, I think further revision would benefit the readers. Therefore I recommend accepting with minor revisions. Minor comments are given below.

We thank the reviewer for their comments. Our responses are indicated below in blue.

**Minor Comments:**

1. In Section 2.1, it is mentioned that the domain is located over the ocean, and the simulation was initialized using observation from CAMP2Ex. However, the information on the exact domain (latitude and longitude) is missing in the section (Is this the domain (between 8-9°N, 119-120°E))?. Also, the authors haven't mentioned the days (Dates) of the simulation and the dominating weather pattern during the period of simulation. This information would help the readers understand the region's features and the weather patterns during the simulation.

The domain is centered on 8.75°N, 119.75°E in the Sulu Sea, and covers a similar region to the ERA-5 data used for initialization. We have updated the text in Table 1 to include the center point and dates of the simulation. However, we want to clarify that because this is an idealized simulation and not a case study, we do not intend to replicate the exact weather patterns during a specific time period, and instead aim to simulate similar/realistic congestus clouds as were observed during CAMP<sup>2</sup>Ex.

2. Page 9, 180; Please change interstitial aerosol to interstitial aerosols  
Line 180 now reads "interstitial aerosol particles".

3. Page 11, 1211; Please change timeseries to time series  
Done!

4. Page 11, 1217; Please change suggests to suggest  
Done!

5. Page 14, 1262-263; Please rephrase the sentence "That is to say, they showed that increased aerosol loading caused less efficient rain formation and therefore less efficient aerosol removal through rainout."

We are not sure what the reviewer is asking us to change about this sentence, and so we have retained it as is.

6. Page 21, 1402; Please change feed back to feedback

For clarity, we have changed this line to read: "how aerosol impacts on shallow maritime tropical clouds (cumulus, congestus) subsequently modify the aerosol budget"

7. Page 22, 1412; Please add the surface

We are not sure where in this line the reviewer is suggesting we make a change, so we have retained line 412 as is.

8. Page 22, 1413; Please change have to has

For clarity, line 416 now reads: “each droplet that does form through stochastic collisions with other droplets then has more cloud water available for collection”

9. Page 22, 1432; Please change that is to that are

Line 432 now reads: “[...] found that a mixed domain-wide trend in rain amounts is driven by [...]”.