

This manuscript investigated the impacts of initial ENSO and NAO conditions on the responses to Pinatubo-like forcing. Specifically, the authors focus on paired anomalies of different conditions and show that different initial conditions can lead to distinct volcanic responses. The research topic is interesting and crucial, but the manuscript is not well-constructed. Therefore, I do not suggest this manuscript to be published in Atmospheric Chemistry and Physics before the authors revise the manuscript to enhance the readability of the manuscript.

Major comments (The line numbers are referring to the track-change file):

1. The introduction and model description and experimental setup are still too lengthy and include lots of information that is not related to the study. For example, in 1.2 ENSO response section, the authors should focus only on studies related to tropical eruptions like 1991 Pinatubo. Also, the authors discuss the different mechanisms that cause El Niño responses to volcanic eruptions but none of the mechanisms is mentioned in the results. Similarly, in the Model section, the authors discuss the difference between E2.1G and E2, which is not related to this study.
2. The discussion includes lots of summary of the results and does not discuss the possibilities of improvement or other points that usually have. The authors should rewrite the discussion section

Other comments:

1. Line 5-6, possible initial conditions? Why use “possible”? And the entire sentence is difficult to understand
2. Lines 8-11, this sentence is extremely long and is “with analysis coincident with” grammatically correct?
3. Line 11, what does it mean for “historical anomalies” and “control conditions”? Does it mean historical and piControl runs or something else?
4. Line 13, what does it mean for “relax SST toward baseline condition”? baseline condition of what?
5. Line 16, is “by initial climate conditions present at the time of the volcanic eruption” grammatically correct? And “at the time” is not accurate enough. Do the authors mean the following winter after eruptions?
6. Line 27, Timmreck et al. (2010)? Please make sure to use the correct format for citations throughout the manuscript. Same issue in Line 30.

7. Line 29-30, “largest volcanic eruptions in the last decade”? Or the authors mean “been widely studied in the last decade”? It is a bit confusing.
8. Line 30-32, any reference for this sentence?
9. Line 32, “a Mt. Pinatubo sized eruption”. A volcano can have multiple eruptions. Please use something like “1991 Pinatubo eruption” to indicate which event it is. And this issue happens throughout the manuscript.
10. Line 42, I don’t think Zanchettin et al. (2013) discuss the carbon cycle. Please make sure all the references are cited correctly.
11. Line 45, only cite ENSO papers but not NAO papers?
12. Line 154, “The current CMIP6 model of E2.1-G ENSO representation”?
13. Line 158, “Thus we note the model has larger variability in the NAO, likely linked to the model’s increased frequency in ENSO events” is this argument in Kelley et al. (2020)? I did not find it.
14. Line 181, “no correlation between ENSO and NAO states”? But in Line 158, the authors mention the NAO variability is related to ENSO events.
15. Line 261, “we do not that”?
16. Line 289, “(Miller et al.)”? “present and equivalent”?
- 17.